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Bulletin 73

ARCHEOLOGY 8

METALLIC ORNAMENTS

OF THE

NEW YORK INDIANS

16057
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BY

WILLIAM M. BEAUCHAMP S. T. D.

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Bulletin 73

ARCHEOLOGY 8

METALLIC ORNAMENTS

OF THE

NEW YORK INDIANS

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METALLIC ORNAMENTS OF NEW YORK INDIANS

As there were national and provincial costumes in the countries of Europe, so were there differing fashions of dress and ornaments among the aborigines of New York and of the United States. In the heat of summer the simplest possible costume prevailed, except on festive occasions, and many had scant clothing in the winter season. On the other hand, the feather or fur dresses, or those of tanned or woven goods, have been described in picturesque terms. Without recounting these, it seems proper to give some idea how the New York Indians were arrayed when the white man came, and for some time after.

Henry Hudson said that the natives about New York bay wore various skins, and had ornaments of copper, but later writers were more elaborate in description. In the battle on Lake Champlain in 1609, the French leader was told that the three Mohawks "who bore three lofty plumes were the Chiefs, and that there were but these three and they were to be recognized by those plumes, which were considerably larger than those of their companions. . . They were provided with arrow-proof armor, woven of cotton thread and wood." Arent Van Curler mentioned similar Mohawk armor in his journal, Dec. 23, 1634. He saw a sham fight in a Mohawk town, nine men on one side and 11 on the other. "Some of them wore armor and helmets that they make themselves of thin reeds and strings so well that no arrow or axe can pass through to wound them." *Wilson*, p. 91

In the *Journal of New Netherland*, written from 1641 to 1646, it is said that the Indians "go almost naked except a lap . . . and on the shoulders a deer-skin or mantle, a fathom square of woven Turkey feathers or peltries sewed together, they make use now greatly of Duffels, Cloth Blue or Red, in consequence of the frequent visits of the Christians. In winter they make shoes of Deer Skins, manufactured after their fashion." *O'Callaghan*, 4:4

In his *Description of New Netherland* (1671) Arnoldus Montanus is quite elaborate, but had most of his account from the earlier one of Van der Donck. He said:

The clothing of the *New Netherlanders* is most sumptuous. The women ornament themselves more than the men. And although the winters are very severe, they go naked until their thirteenth year; the lower parts of the girls' bodies only are covered. All wear around the waist a girdle made of the fin of the whale or of seawant. The men wear between the legs a lap of duffels cloth, or leather, half an ell broad and nine quarters long; so that a square piece behind hangs over the buttocks and in front over the belly. The women wear a petticoat down midway the leg, very richly ornamented with seawant, so that the garment sometimes costs three hundred guilders. They also wrap the naked body in a deer's skin, the tips of which swing with thin points. A long robe fastened on the right shoulder with a knot, at the waist by a girdle, serves the men and women for an upper ornament, and by night for a bed cover. Both go, for the most part, bareheaded. The women bind their hair behind in a plait, over which they draw a square cap thickly interwoven with seawant. They decorate the ornaments for the forehead with the same stuff. Around the neck and arms they wear bracelets of seawant, and some around the waist. Shoes and stockings were made of Elk hides before the *Hollanders* settled here. Others made shoes even of straw. But since some time they prefer Dutch shoes and stockings. *O'Callaghan,* 4:125

In the *Remonstrance of New Netherland,* 1649, we are told that, beside a piece of duffels, deerskin or elk hide,

Some have a bearskin of which they make doublets; others again, coats of the skins of racoons, wild cats, wolves, dogs, fishers, squirrels, beavers and the like; and they even have made themselves some of turkey's feathers; now they make use for the most part of duffels cloth which they obtain in trade from the Christians; they make their stockings and shoes of deerskins or elk hides, some even have shoes of corn husks whereof they also make sacks. . . They twine both white and black wampum around their heads; formerly they were not wont to cover these, but now they are beginning to wear bonnets or caps which they purchase from the Christians; they wear Wampum in the ears, around the neck and around the waist, and thus in their way are mighty fine. They have also long deers-hair which is dyed red, whereof they make ringlets to encircle the head; and other fine hair of the same color, which hangs around the neck in braids, whereof they are very vain. *O'Callaghan,* 1:281

The Dutch accounts are mainly of the Algonquin tribes toward the sea. In the interior ornaments at first differed. The Iroquois had very few shell beads, but sometimes used perforated fresh-water shells and beads of colored sticks. Sweet grass was tastefully woven, and colored porcupine quills, moose and deer hair were used in embroidery. There were a few bone ornaments, and many of perforated wood. Feathers were everywhere worn, and in a tasteful way. Skins were used with or without the fur, in the latter case being finely finished and adorned.

Father Bruyas gave the names of a few Mohawk ornaments used in the latter part of the 17th century. *Asara* was a necklace or belt, used also for ornaments put around the forehead. *Garensa* was a string of glass beads. *Gentare,* to put red hair about the neck. *Ennitiagon,* to put any ornament there. *Osa* was a robe, and *Tsiosat tsonnito,* a robe made of six beaver skins. *Atouannha* was a bracelet; for these they always wore, but it is significant that no word is given for brooches. *Onnigensa* describes the hair of women hanging down behind, it being the custom to braid it. *Gannonsen,* to mark on the body with the point of a needle, is the only allusion to tattooing, though this was frequently done. *Gasire* was a covering with long hair, called Iroquois stuff. *Garisk* was a stocking, and *Garisk onwe* mittens. There are also names for shoes, socks, blankets, caps and suspenders.

Curler (Corlaer) recorded a few words of this nature in 1635. *Assire* or *Oggaha* was cloth; *Endathatste,* a looking-glass; *Tiggeretait,* combs; *Dedaiawitha,* shirts; and he obtained other names for beads, wampum, caps, stockings and shoes. They had already European articles in constant use.

While there were early notices of copper ornaments along the Atlantic coast, Hudson was the only one to mention them as occurring within the limits of New York. Native copper implements have often been found in the interior of the State, but early metallic ornaments are there very rare, comprising only small beads. After early trade or colonization commenced, all was quickly changed. Copper and brass arrows replaced those of flint, and steel knives those of stone. Brass kettles were lighter and stronger than those

of stone and clay, and soon took their place. European beads came into request, particularly the large and artistic ones of Venice, globular or elliptic. Very long glass bugle beads were also much used, and the Jesuits brought rings and medals in abundance. Metallic bangles long disputed the field with the teeth of the bear and the elk, winning the day fully only when these animals vanished from the land. With the development of the wampum trade by the Dutch, in exchange for the prized beaver furs, shell beads and larger ornaments abounded in every Iroquois village. When the red pipestone came, a little over two centuries ago, the sphere of native ornament became greatly enlarged. Till near the close of the 17th century brass and copper delighted the Indian's soul. Then came silver ornaments, holding sway for nearly two centuries more. In the last half of the 19th century these gradually gave place to the cheap jewelry of the day, and New York Indian ornaments, as such, almost ceased to exist.

In the nature of things, we have but a confused idea of how an early Indian appeared when arrayed in all his bravery. The pictures which illustrate the first histories and descriptions were made in Europe, and are the artist's conceptions of things he never saw. A few seem to have been made under the supervision of the respective writers, but even these are far from accurate. Champlain's picture of the siege of the Oneida fort is a familiar instance. The illustrations of Capt. John Smith's various accounts have the same character. In all there is a groundwork of truth, but in all the details are affected by distance and the defects of memory, and still more by the taste or imagination of the artist.

This may possibly be otherwise where verbal descriptions are given, but allowances must be made even then. Usually men described what they saw in a general way, but we must remember that many described what they had not seen, using the accounts of others. There can be no question that this was often done without the slightest intimation that the matter was not original. Bearing this in mind, a few word pictures of personal appearance may be given, some of them outside this State.

In Wood's *New England Prospect* we are told that "a Sagamore with a Humberd in his eare for a pendant, a black hawk on his *occiput* for his plume, Mowhackees for his gold chaine, a good store of Wampompeage begirting his loynes, his bow in his hand, his quiver at his back, with six naked *Indian* spatterlashes at his heels for his guard, thinkes himselfe little inferior to the great *Cham;* he will not stick to say he is all one with King *Charles.*" *Wood,* p. 74. Of the Indians in general, in 1634, he adds to this account that "although they be thus poore, yet is there in them the sparkes of naturall pride, which appeares in their longing desire after many kinds of ornaments, wearing pendants in their eares, as formes of birds, beasts and fishes carved out of bone, shels and stone, with long bracelets of their curious wampompeag and mowhackees, which they put about their necks and loynes." At that time the women wore coats of turkey feathers. He said also: "In the winter time the more aged of them weare leather drawers, in forme like Irish trouses, fastened under their girdle with buttons." For more comfort, "many of them weare skinnes about them in forme of an Irish mantle, and of these some be Beares skinnes, Mooses skinnes, and Beaver skinnes sewed together, other skinnes, and Rackoone skinnes; most of them in winter having his deepe furr'd Cat skinne, like a long large muffe, which he shifts to that arme which lieth most exposed to the winde." *Wood,* p. 73

This will suffice for the clothing and general ornaments of the New York Indians toward the ocean, who were of the same family as those of New England, and whose apparel would be much the same. A few words may be said of the Iroquois in the interior, whose early opportunities of obtaining shell and metallic ornaments were few indeed.

While most of the Huron-Iroquois went much of the time nearly naked, they did not in the least object to fine robes and ornaments for festive occasions. Champlain described the Huron women as wearing a petticoat, and often heavy strings of beads. Beaver robes were common. The Jesuits said that men and women went bare-headed, and a headdress was used only as an ornament. Their robes were the hides of elk, bear and other animals, and the women

painted these, drawing lines from the top about two inches apart. They thought most of the skin of a small black animal, as large as a rabbit and with soft fur. About 60 of these were required for a square robe. The tails hung down, making fringes, and the heads formed borders above. *Relation*, 1634

The ordinary shirt or tunic was made of two dressed deerskins, quite thin, fastened on the shoulders and reaching midway on the leg. Fringes were cut in this at the armholes and around the bottom. Coverings for the arms were sometimes added, secured about by cords before and behind. Claws, hoofs and teeth were occasional ornaments, but metallic ornaments soon replaced these. Dyed hair was freely used, and feathers and porcupine quills were often in request. In early warfare the head of some animal was often placed on the warrior's shoulder or head. Painting was customary both in peace and war, and tattooing was frequent. The former still continues among the New York Iroquois.

As this paper deals mainly with the metallic ornaments used by the Indians of New York, which are but rarely prehistoric, the foregoing will suffice to show the general attire of these nations at and about the advent of the white man. After that time changes came rapidly. Those who would follow up the subject in a broader way can not do better than to consult the *Dress and Ornaments of Certain American Indians* by Lucien Carr. This treats of the attire of the Indians of the United States east of the Mississippi, as described by early chroniclers. Of the changes of the last two centuries little is said, nor of some which came 50 years earlier. His admirable summary, with its accurate notes, is valuable and convenient for this early view, but hardly touches the subject now to be considered.

In a previous paper, some references have been made to the reports of copper articles seen by early navigators. Verazzano saw Indians wearing plates of wrought copper as he sailed along the Atlantic coast. These they valued highly. Farther northeast, the savages had copper ornaments in their ears. De Soto saw small copper hatchets in Georgia, and heard of a supply of this metal farther north. The Montreal Indians told Cartier of copper in 1535.

Gosnold met with it on the Massachusetts coast in 1602, and one of his associates has left us quite an account. Brereton said that the Indians "have also great store of copper, some very red, and some of a pale color: none of them but have chains, earrings or collars of this metal; they head some of their arrows herewith, much like our broad arrowheads, very workmanly done. Their chains are many hollow pieces connected together, each piece of the bigness of one of our reeds, a finger in length, ten or twelve of them together on a string, which they wear about their necks; their collars they wear about their bodies like bandeliers a handful broad, all hollow pieces like the other, but somewhat shorter, four hundred pieces in a collar, very fine and even set together. Besides these they have large drinking cups made like skulls, and other thin blades of copper very much like our boar spear blades." *Brereton*, ser. 3, 8:91

Another in the same company tells of "tobacco pipes steeled with copper," and of a savage who had "hanging about his neck a plate of rich copper, in length a foot, in breadth half a foot for a breast-plate, the ears of all the rest had pendants of copper."

It can hardly be doubted that this was European metal, the pale copper approaching brass or bronze, though Brereton understood from the signs of an Indian that they dug it on the mainland. The same kind of arrowhead is yet found on recent Iroquois sites. The hollow cylinders of metal had reached the Mohawk valley certainly as early as 1600. The belts with their short tubes still occur in recent Iroquois graves, "very fine and evenly set together." All these will be illustrated from various collections, and their identity can be shown by comparison with the famous relics at Fall River.

The "tobacco pipes steeled with copper" present the same difficulty that is met with in those described by Hudson in New York bay. If both descriptions are allowed, they must also have had the same origin as the arrowheads and tubes. In this connection it may be suggested, as is probably true, that Roger Williams's famous statement that the Narragansetts "have an excellent Art to cast our Pewter and Brasse into very neate and artificiall Pipes," had some slight early ground. Brass and pewter pipes occur on Indian

sites in New York, but there is little reason to think them made by the red man. Such pipes Williams probably saw among the Rhode Island Indians. They could cast pewter and lead, and he too quickly determined that all were made by them. The copper used along the Atlantic coast at the beginning of colonization is now generally conceded to be European, with some rude articles of native metal here and there. The mouth of the St Lawrence was so long haunted by European fishermen that many things may have found their way southward along the coast through aboriginal trade, but it is equally probable that some adventurer pushed his vessel along the shore, without recording his trip.

The writer's general conclusion is that native copper articles were not in use in New York as late as the year 1600, but that European articles of brass or copper were used along the seashore, and had even reached the interior by that time.

One article from the Mohawk valley, not represented here, is a stone mold for casting lead or pewter ornaments. It is a flat piece of stone in which three circles have been neatly cut, each with several deeper depressions, to form bosses on the rings. The diameter is about that of a common cent, and there are sloping grooves to carry off the superfluous metal, or to run the metal into the mold, that being covered.

Native copper ornaments

While implements of native copper have been found in New York, ornaments are very rare and mostly confined to beads. A very few are undetermined, but several forms found elsewhere are unreported here. On the other hand, no state has yielded more recent metallic ornaments, and the use of some peculiar forms yet continues. There is little that is certain as to the date of these earlier articles, but most of them may be allowed quite a respectable antiquity. The recent ones can often be dated within a score of years, being found on sites whose age and time of duration are known.

The native copper beads of New York are either small spheres or hollow cylinders, and of these the first seem most numerous.

Mr S. L. Frey gave an account of some he found in a grave near Palatine Bridge in 1879. In this grave were stone tubes. He said:

Near the tubes, and also embedded in the hematite, I found what had apparently been a necklace or headdress, composed of copper and shell beads; the former were badly oxidized, and had been made of thin sheets of copper rolled into tubes. That they had been worn around the head or neck was evident, for one side of the skull and the lower jaw were stained a dark copper color. . . On the same level as the last grave and about 6 feet to the west of it, I came to another, similar in all respects, lined with flat stones . . . The relics found were the remains of a necklace of shell beads, little copper tubes and small seashells. *Frey*, p. 642–43

Mr Frey kindly furnished fig. 369, showing two of these beads, adding this note:

The copper beads found in the tube graves are very small, made of rolled metal, and so much oxidized as to make it difficult to determine their original size. I, however, send the best sketch I can. They appear to have been from a quarter of an inch to 1½ inches long, and perhaps ⅛ inch in diameter.

The question of comparative antiquity is suggested by the varying character of these graves, but that most of them were of quite an early age, no one will doubt. In form the beads are precisely like those of historic times and made in the same way. Researches in Ohio have demonstrated the early use of native copper beaten into thin sheets, preparatory to use in other forms, so that this presents no difficulty.

Fig. 239 is a similar bead found by the writer by the Seneca river, in 1878, in the same field where a fine native copper spear was obtained. In section it is more nearly square than circular, and is much corroded. Small ornaments of this kind would rarely be long preserved except under favoring circumstances, and are thus naturally rare. In graves or on village sites only would they last long. This will account for the brief treatment native copper here receives.

There was a later use farther west. Alexander Henry saw native copper at the mouth of the Ontonagon river in 1765, and said that the Indians "were used to manufacture this metal into spoons and

bracelets for themselves. In the perfect state in which they found it, it required nothing but to beat it into shape." *Henry,* p. 187

Mr P. M. Van Epps described in the *American Antiquarian* for 1894 a cemetery north of Schenectady, in which a copper ax was found. In another grave afterward, 135 copper beads were obtained. In a letter to the writer describing these, he said:

> The copper beads were quite peculiar, being quite unlike the common tubular beads of the western states. These were made by rolling together quite thick chunks or welts of the native copper, till the finished bead was, in some cases, as large as a small hickory nut. The bar or strip of copper used was, for some of the beads, so thick that two or three turns made a large bead. Mr Clute, the finder of the beads, told me that he gave two of the larger ones to friends, mechanics in the Schenectady Locomotive Works, who desired to pound them into finger rings, but found, to their surprise, that not a file in the works would cut them, and that they had to be annealed before they could be worked out as they wished. In short, that they were tempered or hardened. I can not vouch for this. At any rate, the beads are a unique lot, and it is very unfortunate that the finder allowed them to be separated.

These were found about 1890. The writer, himself, has seen a bit of native copper from Brewerton which rang like steel. Fig. 236 and 237 represent two of these beads still belonging to Mr Clute. Fig. 238 is a smaller one now owned by Mr Van Epps. They are very well worked, and the junction outside is not at first apparent. The surface is neatly rounded, and the ends flattened. These are some of the smaller beads. The larger ones could not be obtained.

Recent beads

The earlier brass beads show European contact preceding colonization. Fig. 245 is a fine cylindric bead of this material, well made and over 3 inches long. This came from the early fort on Garoga creek in Ephratah, and was found by Mr S. L. Frey. Fig. 256 is another from the same fort, which is less than half as long. Out of hundreds of relics found there these are all that came from the white man's hands. It is reasonable to suppose that the Mohawks who used these, had them before they left Canada. This is in the Richmond collection. Fig. 234 shows another in the same collection

from the early Cayadutta fort, south of Johnstown. This is nearly 7 inches long, straight and cylindric, and is the only European article yet reported from that site. Had these forts been near the Mohawk river, there might have been a possibility that these beads were lost by wayfarers. Their positions are too remote and difficult for this; and, as their date is just before the great influx of European articles, they may be connected with Cartier's visit to Montreal, or with traders who soon followed. [After the above was in print the writer examined a tubular bead of European copper, found on an early village site in Jefferson county in 1903. This and a fragment of pottery definitely placed this village in the latter part of the 16th century. The bead retains its smooth surface and is 1½ inches long.]

A few later examples of the same class of ornaments may be given. Fig. 243 is a fine cylindric brass bead, found by Mr Frey on the site of the early Mohawk town of *Tionontoguen*. This is 3¼ inches long. From another site he has a similar larger one, 1½ inches long and nearly half an inch in diameter. Fig. 244 is longer than the last figured, and slightly tapering, as though it might once have been the stem of a brass pipe. It is 3⅞ inches long, and was found within the stockade in Chase's woods, on the south line of Pompey. Fig. 254 is an unusually slender brass bead, found at Indian hill in Pompey. This gives it an age of nearly 250 years. It is about 2⅛ inches long and is well made. Fig. 255 is from the fort near Pompey Center, a little earlier than the last and a few miles farther south. It is ruder than most others. Fig. 257 is from the same fort, and is very neatly finished and in fine preservation. It is less than an inch long. Fig. 249 shows four small beads of polished brass, also from this site and of fine workmanship. The brass is neatly cut at the edges and symmetrically rolled. Three of them are much smaller at the ends than in the center, differing from most that the writer has seen.

While many of these beads retain their first use, no small portion were worked up from broken kettles, as other ornaments were. Fig. 248 is probably not of this character. It is a neat and cylindric coil of narrow brass or copper, forming a close but elastic tube, 3¾ inches long and over ⅜ inch in diameter. It was taken from a grave

on the edge of Canajoharie village. With it were iron tools and an R. Tippet pipe.

Fig. 246 is in the Hildburgh collection and was obtained at a recent Oneida site near the lake. It is a slender cylindric coil of thin brass, 3 inches long, and retaining the cord on which it was strung. Fig. 247 the writer picked up on a recent Cayuga site. It is slightly curved, perhaps by use, and is smaller and ruder than the last. Such forms have been abundant and were easily made.

Fig. 261 has a slight resemblance to the last, but is unique, so far as known. A slender wire was doubled and neatly twisted, making a slender link about 2¼ inches long. Several of these united in a chain made a graceful necklace. This came from the Smith farm, west of Fort Plain.

Fig. 250 to 253 are from a unique lot of slender silver beads, most of which now belong to the writer. They vary somewhat in length and thickness, some being no thicker than the common knitting needle of old times. Fig. 253 is the longest and thickest of this lot, being 2¼ inches long. They are plain or slightly ornamented. These came from the Onondaga reservation. Fig. 197 is taken from Morgan's figure of shorter but similar beads. In the latter figure the slender silver tubes were divided by globular glass beads, but this practice did not prevail among the Onondagas.

Three illustrations are given of small and spherical brass or copper beads, all of which are recent. Fig. 240 shows those which are quite small. These came from Boughton hill in Victor, and they are of the 17th century. They are now in the Buffalo collection, and are but little larger than a large pin's head. Fig. 241 shows five out of a lot of 10 beads in the Hildburgh collection. These are much larger, and came from Ontario county. They may be given the same date, as silver took the place of copper and brass about the beginning of the 18th century. Among the poorer Indians they may have continued longer. Fig. 242 shows some beads from the Onaghee site, on the McClure farm in Hopewell. They are a little smaller than the last but of the same character. These also are at Buffalo.

Fig. 235 is a unique article, differing from a cylindric bead and yet suggestive of one. It was found at Indian castle in Pompey, a site occupied in 1677 and for some time earlier. It is a long and slender silver tube, having rows of small perforations at one end. This suggests its use by the medicine men in blowing the medicinal water on the patient. It is moderately curved and is seven inches long, but is quite likely not to have been a mere ornament. If it had that character, something might have been attached by using the holes. One small elliptic lead bead came from the Onondaga fort of 1696.

Pendants or bangles

A favorite ornament for the past three centuries is a conical roll of sheet metal, attached to various parts of the dress. Collectively they may form fringes, and their tinkle adds to the music of the dance. They often have colored hair, or other adornments, drawn in so as to form tassels. The copper has often preserved these frail materials for over two centuries. They are usually of moderate size, but Mr Hildburgh has one from Oneida Valley about 5½ inches long. Mr Schoolcraft figured a cluster of three from Onondaga county, presumably from the site of 1696. He said they were "three fourths of an inch in length, bell-shaped, and composed of native copper, beat very thin." *Schoolcraft*, p. 143. At a later day his judgment would have been different. They are found on most recent Iroquois sites, but the later Indians have used other metals. The writer recalls none of native copper.

Fig. 262 is of brass and of unusual size. The writer found this on Indian hill, Pompey, many years ago, and the smaller ones were then frequent there, as well as shreds of sheet brass and copper. Fig. 263 is a characteristic example found 2 miles west of Canajoharie. Fig. 260 is one of the common form from Indian hill. Fig. 259 is one from Cayuga, retaining the ornamental hair and part of the cord. They have been common on most recent Iroquois sites, and are frequent in collections. Fig. 258 is a cluster of these belonging to an Onondaga Indian, but these are now made of iron. Lead or zinc may be used instead. One early form of bangles was of deers hoofs, and for this sheeps hoofs may be substituted.

Bells

When the French abandoned the fort at Onondaga lake in 1658, the mission bell was carried to Indian hill, and was there used for a long time. In early days nearly all the fragments of this were found, and also a small bell without a clapper. Mr Clark said that the former "would have weighed probably one hundred and fifty or two hundred pounds. The metal is very fine. . . Time and exposure have not changed it in the least. When found, some twenty years since, it was broken up, and the pieces found were enough to make it nearly entire." *Clark*, 2:276

Mr Clark also says that near the fort of 1696 "numerous little bells, such as are sometimes used by the Romish priesthood," have been found. He reported this from hearsay; but the only bells familiar to the writer from Iroquois sites are those commonly called hawk bells, like the sleigh bells of modern days, but lighter. These are frequent, and were probably attached to the dress when dancing. They are usually of brass, and are sometimes nearly perfect. Mr W. L. Hildburgh has two of silver from Ontario county, the only ones yet reported. They are as large as his brass bells, and larger than some. Fig. 267 shows one of these. They are sometimes quite small, as in two of his brass ones from the same county. Fig. 266 shows half of a large one from Pompey. Fig. 264 is a fine one from the fort near Pompey Center, and this seems the oldest yet reported. When some from that town were exhibited, a local paper said, "These bells belong to a period 3000 years ago." Fig. 265 is a smaller size from Fleming, where they are often found.

The Moravian missionary, Heckewelder, spoke of this feature of Indian dress in the 18th century. The women have "a number of little bells and brass thimbles fixed round their ankles, which when they walk, make a tinkling noise, which is heard at some distance; this is intended to draw the attention of those who pass by, that they may look at and admire them." *Heckewelder*, p. 205. At the burial of a Delaware woman of rank, on the upper borders of moccasins "were fastened a number of small round silver bells, of about the size of a musket ball." *Heckewelder*, p. 271

He elsewhere refers to the "thimbles and little brass rattles on their ankles." In the summer of 1901 the writer saw some of these thimbles in Fleming, taken from a Cayuga grave. They were simply perforated at the end for suspension, and must have admirably answered Indian purposes.

Men had plainer ornaments for a similar use, but the bells and thimbles were for the women, who were expected to be better dressed. Sometimes bits of brass were perforated and strung on the moccasins or other parts of attire, to produce a tinkling sound. These might please the ear in the dance, but it hardly seems probable they were intended to draw attention to the wearer at other times. Such ornaments were not peculiar to America.

Fig. 375 shows one of two pewter hawk bells found in Pompey, which could have produced but a dull sound. They are of small size and are now much flattened. The writer has seen no other bells of this metal.

Bracelets

Bracelets of native copper occur in various parts of the country, but there are none of which the writer feels certain in New York. These early ornaments were simple rings, usually thick, and sometimes with the ends so firmly in contact as to show they were not intended to be removed. Some of this kind were found in the great Smith mound in Kanawha county, West Virginia. They were elliptic and heavy, the ends abutting, and measured across $2\frac{3}{4}$ by $2\frac{1}{4}$ inches. There were six on each wrist of a skeleton. In the same mound was a copper quadrangular gorget with indented sides and two perforations. The length was $3\frac{1}{2}$ inches by $3\frac{3}{4}$ wide. These gorgets also do not occur in New York. Some have been found in Wisconsin.

In a mound in Crawford county, Wis., was an instance of intrusive burial, with many recent relics. Among these were three copper bracelets, 10 silver ones fluted, like those in use here, a copper kettle, silver locket, silver earrings, six circular silver brooches, a copper finger ring, and a double silver cross, $5\frac{1}{4}$ by $2\frac{3}{8}$ inches. *Thomas.* Explorations, p. 51

In the *Relation* of 1658 it is noted that the Indians not only wear bracelets on the wrist, but above the elbow and ankle, and on the leg. These uses partially appear in the account of Capt. David's dress, elsewhere given. In Romney's picture of Brant the broad and simple silver band above the elbow is conspicuous and tasteful.

A few copper bracelets in New York are much like early forms, but they also suggest nose rings. Others are made of copper wire, neatly bent into the desired form. Last come the flat silver bracelets, with holes for attachment at the ends. Many of these were made by Indian silversmiths, but the writer has seen one more elaborate pair with the name of an Albany silversmith, and one of the Wisconsin mound bracelets had on it the name of Montreal, and another the letters A. B. The silver bracelets sold at an early day by the French and English at Niagara and Oswego, are mentioned elsewhere. The Seminoles of Florida still wear silver wristlets and headbands, and make ornaments from coins.

From the site of the Onondaga fort of 1696, Mr Clark reported "bracelets for the wrists 3 inches broad, of brass highly wrought." *Clark*, 2:281. Silver was little in use then, but the writer has seen no brass bracelets anywhere which would agree with this description. They are either quite narrow or else made of copper wire, bent back and forth so as to form a broad surface. Even then they have no great width. He may possibly have referred to the long diameter, as it encircled the wrist.

Fig. 305 is a copper wire bracelet from Fleming, which is a good example of this broad form. From its size, it must have been worn by a young person or woman. Fig. 309 is of the same character and from the same place. This includes a sectional view. Fig. 307 is a narrower one from Indian hill, Pompey, which is formed like the preceding.

Fig. 308 may be either bracelet or nose ring, but it is hardly likely the Indians would have used copper for the latter. It is a single length of heavy wire, neatly rounded at the ends, and came from the last named site. Fig. 382 is of the same character and from the same place. Fig. 310 is much like this, but the ends expand. This is from an Oneida site at Munnsville. Fig. 306 is a fine example,

somewhat flattened in the center and pointed at the ends, looked at horizontally, but with uniform breadth and rounded points when viewed the other way. It is grooved within and without, describes a true circle, and came from Cattaraugus.

Two narrow brass bracelets have one edge serrated wholly or partially. Fig. 370 is one of these from Fort Bull, near Rome N. Y. The ends are shown within the figure. The serration is complete in this. The other is from Geneva N. Y., where Mr George S. Conover had several of this kind. Fig. 371 shows this. The localities place them in the middle of the 18th century.

Fig. 372 is a small, narrow bracelet of fluted silver. Fig. 373 is of the same material, but is larger and has a series of circular figures stamped on it. Both are from Geneseo and are in the Buffalo collection. They belong to the latter half of the 18th century.

Fig. 365 is a thin and broad bracelet of corrugated silver, obtained by the writer on the Onondaga reservation. It is quite elastic, and there are two holes at each end for the insertion of strings for tying it. There are several narrower examples of this form in the State Museum, which do not differ materially from this.

Loskiel observed that "both men and women are fond of silver bracelets."

The armlet was of a similar character, and therefore requires no illustration here. It was broader, and worn just above the elbow. In Romney's picture of Brant this is conspicuous and very wide. They are not in use in New York now, but were often mentioned by early writers. One white man who was taken prisoner and adopted in 1763, was arrayed in Indian costume, and had both his arms "decorated with large bands of silver above the elbow, besides several smaller ones on the wrists." *Henry*, p. 110

These armlets were still in use less than 50 years ago, but not commonly, and they have long since disappeared. The writer has seen thicker bracelets of silver, made by an Albany silversmith, but regrets that he has neither example nor drawing of these. Except in material they were much like those used by our own people.

Fig. 405 to 410 are of silver bracelets in the State Museum, all of which were collected by Mrs Converse. All are fluted, and fig.

405 has notches along one edge, and some good tracery. Fig. 410 is much like this, but the fluting and tracery are somewhat different. The former has the central lines in scallops, but in the latter they cross. Fig. 406 to 409 have no tracery, but are simply fluted. According to the writer's notes, the figures are rather deep for the size. With the depth of little more than $\frac{5}{8}$ of an inch, they should be about $2\frac{1}{2}$ inches across, but this is of no special importance. The form and style are well represented.

Brass tubes in leather belts

Brereton's account (1602) of the belts and collars, used by the New England Indians and made of hollow copper cylinders arranged side by side has already been quoted. That these were of European metal is now almost certain, though he thought them native. The arrows described are like those on recent New York sites. The copper plates, so called, are like others of brass elsewhere. The arrangement of tubes to form an ornamental belt is one familiar in western New York. The skeleton found at Fall River Mass. had similar articles, one being a brass plate 13 inches long, arrows precisely like those of the Iroquois in the 17th century, and a belt of brass tubes, each $4\frac{1}{2}$ inches long, which was the width of the belt. These were not arranged on leather, as in New York, but on pieces of sinew, being much longer than our tubes.

Capt. John G. Bourke described a similar ornament of tubes, apparently not arranged as a belt:

> In an ancient grave excavated not far from Salem, Massachusetts, in 1873, were found five skeletons, one of which was supposed to be that of the chief Nanephasemet, who was killed in 1605 or 1606. He was the king of Namkeak. On the breast of this skeleton were discovered several small copper tubes . . . from 4 to 8 inches in length, and from one eighth to one fourth of an inch in diameter, made of copper rolled up, with the edges lapped. *Bourke*, p. 494

In a grave in Caldwell county, N. C., were similar articles, but they seem to have been strung as pendants for the ears. There were five copper cylinders, $1\frac{1}{4}$ to $4\frac{1}{4}$ inches long, and from a quarter to half an inch in diameter, strung on leather. They were made of thin strips of metal, rolled so that the edges met in a straight joint.

Besides this there was a bracelet of similar smaller tubes, alternating with shell beads of modern form, and four iron implements. This determines the general age of some engraved shell gorgets found in this grave, which are more elaborate than those of New York. *Thomas,* p. 337

Some copper cylinders in the Toronto collection have a general resemblance to these recent forms, and suggest a similar use, but, while the arrangement is parallel, about the diameter of the beads apart, they are differently attached. Mr Boyle said:

This cut represents nine cylindrical copper beads just as they were found in the Tremont Park mound, Tidd's Island. They were lying on a piece of the original hide or leather to which they had been attached, and I was careful not to disturb them. They are made of beaten or leaf copper rolled into their present shape. In length they are from $\frac{3}{4}$ of an inch to an inch, and vary from $\frac{3}{16}$ to $\frac{5}{16}$ of an inch in diameter. The fine thongs by which they were sewn to the hide are still adherent to the underside. *Boyle,* 1888, p. 49

Some examples of leather belts, adorned with brass tubes, have come before the writer, and, while the number of rows may vary, the same plan was followed in all New York specimens. Parallel and vertical cuts were made in the leather, in regular lines along the belt, and each division was wound with a thin piece of brass, giving a pleasing effect. Several rows of these copper or brass tubes thus encompassed the body.

Articles of this kind would not be easily lost, or if so, easily preserved, and they can be expected only in the graves of those able to afford such ornaments. Apparently they were far from common, and but two have met the writer's eye. Fig. 276 shows one of several fragments of one of these belts, taken from a Cayuga grave near Fleming. The brass tubes in this are of considerable size, being both longer and wider than in the other example. In its fragmentary condition there is no present indication of its width, except that the broadest part of the leather may be supposed to approach one margin. To the three remaining rows of tubes not more than one could reasonably be added.

Fig. 277 is a broader fragment, which has more rows of smaller tubes. There are five of these, probably all those belonging to the

belt. The broad line of leather on the upper side may be considered the margin, and the narrow fragmentary strip on the lower edge seems to have been outside of the tube arrangement at first, as it is now. This was found by Mr C. F. Moseley, at Honeoye Falls, and thus was used toward the end of the 17th century. That century, among the Iroquois, might well be termed the age of bronze.

Small images

When the red pipestone reached New York, about the end of the 17th century, it was found available for ornaments of all kinds. Shells also were more freely used, and both aided in displacing some metallic animal figures which had been made and used to a moderate extent. Fig. 269 is one of the oldest of these, and came from Indian hill, Pompey. It represents a flying squirrel, and is made of pewter or lead. These figures have no provision for suspension, and may have been used either for a toy or charm.

Fig. 268 is a small pewter human figure which lacks the arms. It is from Indian castle, Pompey, and of about the same date as the last. It is probable such figures were at one time abundant, but, when finer ornaments appeared, these were melted for bullets. These rude forms were easily designed and cast, and may be considered purely Indian work, possibly even that of children.

This can hardly be said of fig. 272, which is a rude turtle made of iron and found on the same site as the last. The casting of iron was beyond the Indian skill, but why a white man should have made so rude a figure, it is not easy to say. Fig. 273 closely resembles this in character, but the material is lead. It came from the same site. Fig. 274 is from a site in Pompey south of the last two, and perhaps a little later in date. It is rude and broken, and seems made of copper, but this has not been determined.

Fig. 270 is a rude bird, made of lead or pewter. This came from the McClure farm in Hopewell. Fig. 271 is a small animal form of the same material, found by C. F. Moseley at Honeoye Falls.

A rude and slender quadruped of lead or pewter came from Pompey, and was evidently cut into shape. The head is broken, but the figure is yet 2¼ inches long. A well wrought horse's leg, of

the same material, is from the same place, and is now 2½ inches in length.

A very fine human figure of iron came from the same place. There is an expanded base instead of the lower limbs, and it is nude except for either a serpent or a scarf passing over one shoulder and under the other. It is but little corroded, and may be of a later date than the site. A rude but spirited figure of an ape shows greater marks of age. This is also of iron, and both may have been children's toys. The last four are now in the state collection.

Lead medals or ornaments

Of about the same age as these animal forms is a series of lead ornaments suggestive of medals. In a sense they are rude, but some have well formed letters or numerals stamped or engraved on them. Fig. 230 is an elliptic medal, the loop of which has been broken off. On the side represented is a human figure, holding by the hands to a crossbar. On one side of the figure is a serpent with open mouth. Unfortunately the writer did not draw or take notes of the reverse. It was found on Darwin McClure's farm, Hopewell. Mr J. V. H. Clark described one like this, from the Onondaga fort of 1696, as "a medal of lead, oval-shaped, an inch and a half long, with the figure of a man suspended by his outstretched hands, supposed to be a representation of our Saviour on the cross, and a figure of a serpent. On the opposite side is a figure of a man in a sitting posture, resembling the characteristic position of the native prophets; or, as some interpret it, the devil." *Clark*, 2:280

Fig. 228 is a fine lead medal belonging to C. F. Moseley, and found by him at Honeoye Falls. On the side represented were well formed letters in a circle. Within and without these are several circles, and in the center are indistinct forms. Mr Moseley thought these parts of a building, perhaps a church. The writer could trace certainly only what seemed indistinct crosses. Of the letters, BEN appeared very plainly. This may be part or an abbreviation of Benedictus. Like most of these medals, this is made of

a flat piece of lead, bent over so as to be double throughout. Compare this with fig. 374.

Fig. 229 is from Tribes Hill, in the Mohawk valley, and is in the Richmond collection. The figures are in relief, and the edge tastefully wrought. The center is irregularly perforated. Fig. 231 is from Indian hill in Pompey. It has the figures 12 above, and below $46\frac{1}{4}$ in early characters. On the reverse is a broad loop for attachment.

Fig. 232 is in the writer's possession, and was found at Boughton hill in Victor. It was formed by welding two flat pieces of lead. These have come apart, and the side having H on it forms a flat ring, the inner line of which crosses the H and forms a circle, outside of which is ornamental work. On the reverse 79 appears above a line, and other characters below. There is a long loop for suspension. Fig. 233 was furnished by Mr James Nelson, of Cold Spring N. Y. It was found on an open air workshop, on the farm of Charles De Rham, but probably had no connection with it. It is pyriform in outline, and flat. There are inscribed characters on both sides and ornamental work about the base. Mr Nelson wrote: "It seems to me it might have been made from a musket ball by one of the few Indians that lingered about the coves of the Hudson." There would seem to be too much metal in it for this origin, but an ounce ball would spread over a considerable space.

Several similar medals from Pompey were placed in the writer's hands after the foregoing were described. All either were or had been double, with projections behind for attachment. Two are nearly alike, and may be compared with the one belonging to Mr Moseley. In the best preserved of these is a castle in the center, with several turrets. Fig. 374 is of this. The other shows three small crosses on an elevation below and in front of this. This centerpiece is inclosed by two circles of points, now bent out of shape. Between these, on the left, are the letters CAM; then a crown in the center above, and on the right of this the letters PEN. Fig. 398 shows the other, with the central perforation, the back having disappeared. It has the same letters in the same position, but

the crown has been obliterated. Possibly the lettering of Mr Moseley's medal may have been the same.

Another of these Onondaga medals is rude, but is perforated for suspension. The figures 44 are in the center, with ½ on the right of these. Below is the figure 4 with some cross lines. This medal is not large. All these may have been articles thrown away by the whites after using, but picked up and treasured by the Indians.

Mr Frey has a curious and early ornament of this form and material, shown in fig. 387. It is larger than the last two, being 2½ inches in diameter, but has some features in common. In the center seems to be a shield inclosing a large fortified building, flanked by two separate towers. There is an ornamented half circle below these, and a large crown above. The date of 1630 is quite plain. The supporters are rampant animals, perhaps lions, but the heads are much worn. The one on the right shows the lion's mane. In the British arms this is the place for the unicorn. There is no lettering. Like some others, it is made of two plates, one inserted in the center of the other, and flattened to correspond with its outer surface, leaving a projection behind by which it might be attached to a belt or dress. It is much defaced, but the above features are easily seen.

Gorgets

One of the earliest metallic ornaments the Iroquois obtained was a small and perforated disk of brass, thin and saucer-shaped. It may have been used in several ways, but was probably attached to the clothing. The writer has found or seen a number of these. Mr Schoolcraft gave a figure of one of these with a characteristic description: "This article consists of a metal, which is apparently an alloy. It is slightly ovate, and is perforated in the rim, so as to have been hung transversely. Its greatest diameter is $2\frac{4}{10}$ inches. There are no traces of European art about it, unless the apparent alloy be such. Locality, valley of Genesee river." *Schoolcraft*, p. 135. Fig. 227 is from his, which is represented as being flat, but was probably slightly convex.

The finest silver gorget that has come to the writer's notice belongs to Mr Wyman, and came from an Indian grave in Mich-

igan. It is a circular disk, 6¼ inches in diameter, and with the usual tracery on the surface. Two large studs attached it to the garment. Nothing of the kind has been reported in New York, but it is likely that some of the larger ornaments for the breast had this mode of attachment. Silver gorgets were often mentioned in the 18th century, but many forms once in use are now entirely forgotten. Loskiel seems to refer to something like gorgets, where he says that the ornaments "of the men principally consist in the painting of themselves, their head and face principally, shaving and good clean garments, silver arm spangles and breastplates, and a belt or two of wampum hanging to their necks." *Loskiel*, 1:203

Fig. 221 is a small brass ornament of this kind, like a shallow saucer, and with two opposite perforations near the edge for attachment. This was found by the writer on a fort site partly in Wallace's woods, on the north line of Fabius. This was occupied early in the 17th century. Fig. 222 is a similar and larger one from another fort not far away. Both are in good condition.

Fig. 220 is a half circular piece of flat and thin brass, having a perforation near one point. Though its present form is perfect, it was probably circular at first. This came from Pompey Center. A longer one, with two perforations, came from another site in the same town.

Fig. 226 shows a small and thin brass crescent with a central perforation. It was found at Indian castle, Pompey, and suggests an ornament mentioned by Clark from an adjoining site. He said: "Several brass crescents have been found bearing the inscription, '*Roi de France et Dieu.*' These were probably used for nose and ear jewels." *Clark*, 2:262. This has no inscription, and may be smaller than those mentioned.

Fig. 275 is a rectangular brass plate from the Onondaga fort of 1696. There are two perforations near the upper corners, and the lower corners are rounded. Fig. 288 is a rude ornament of flat brass, made at the early day when every fragment of this metal was utilized. It is angular and oblong. One small hole has been completed and a larger one begun. The writer found this with fig. 221. Fig. 290 will illustrate how such fragments were used. It is

a strip of brass with three perforations. Fig. 367 is a pentagonal brass plate, and fig. 154 a brass circle, both perforated. These are from Indian hill, Pompey. There are others elsewhere.

Earrings

The earliest metallic earrings in use in New York were probably those of copper wire coiled and flattened. Fragments of these have puzzled some antiquaries. It is possible that some perforated disks and coins may have served the same purpose at an early day, but they are more likely to have been used in some other way. Glass and shell beads were also utilized for earrings, and probably many other things. In the picture of Colonel Pickering's conference at Buffalo, in 1793, all of the Indians wear in their ears large elliptic disks, each containing an engraved cross. *Stone,* 2:342. This form does not appear in any New York collections.

The earliest unmistakable form was of copper wire, bent at an acute angle in the center, and having the ends bent into a flat coil. This done, the wire was hammered down to half its first thickness. They are often broken in the center, and then give no suggestion of their use. In their symmetric form their purpose is evident. They are occasional in Canada, but are probably more frequent on Onondaga sites than elsewhere. The smallest which has met the writer's eye is a fragment from Ontario county, in the Hildburgh collection. They vary much in size.

Heckewelder described another ornament for the head which he observed at an Indian funeral. "Her long plaited hair was confined by broad bands of silver, one band joining to the other, yet not of the same size, but tapering from the head downwards, and running at the lower end to a point." *Heckewelder,* p. 270

Loskiel said: "At feasts, their hair is frequently decorated with silver rings, corals, or wampum, and even with silver buckles. Some wear a bandage round their heads, ornamented with as many silver buckles as it will hold." *Loskiel,* 1:48. He adds, "They also decorate the lappets of their ears with pearls, rings, sparkling stones, feathers, flowers, corals, or silver crosses." *Loskiel,* 1:49

One observation on Indian headdress, by this author, is of interest:

> The Delaware women never plait their hair, but fold and tie it round with a piece of cloth . . . The Iroquois, Shawanose, and Huron women wear a queue, down to their hips, tied round with a piece of cloth, and hung with red ribbands. The rich adorn their heads with a number of silver trinkets of considerable weight. This mode of finery is not so common among the Delawares as the Iroquois, who by studying dress and ornament more than any other Indian nation, are allowed to dictate the fashion to the rest. *Loskiel,* 1:52

In Miss Powell's account of an Iroquois chief in 1785, hereafter to be quoted, she said he had "a pair of immense earrings, which hung below his shoulders." The picture of Joseph Brant in his youth, by Romney, helps us to understand this, his pendants being of the same length. Half of the earring was a chain of large silver rings. From the base of this depended three chains of the same kind. A system of pendants was a favorite feature of this ornament, as will be seen later. Parts of these were easily detached and lost, and when thus separated have been misunderstood. Their Onondaga name is *Ka-wahs'-hah.*

Fig. 169 shows the earliest form of these ornaments known in New York, and was found in the Onondaga fort of 1654, where many have been obtained, both perfect and fragmentary. It is simply a piece of copper wire symmetrically coiled in opposite directions, and forming a loop in the center. This was then hammered down to a moderate degree. Of course there must have been some means of attachment to the ear, unless the opening was very large. Fig. 168 is from a neighboring site, occupied in 1677, and probably earlier. They were extensively distributed, but their use was confined to that century. They are often broken at the loop, and in this condition have perplexed some collectors.

A large proportion of the silver earrings known are later than colonial times, as will be seen in fig. 170, furnished by Mrs Converse, whose fine collection is well known. This has not only the American eagle, but the union shield on the breast. There is provision for a pendant in the loop at the base of the tail.

Fig. 171 also suggests a recent date, having the shield, scroll, eagle's head and stars. This also is imperfect, and came from Pompey. Fig. 173 is almost perfect, and was obtained at Cattaraugus by Dr Evarts. There is an arch above the spread-eagle, and a thistle head forms the pendant. These are national emblems of the United States and Scotland, but there is no reason for giving them any significance here. All that was desired was a pretty design.

Fig. 174 again shows the American eagle in an elaborate way, the stars appearing on the arch overhead. It is much like the last, having a similar boss on the breast, but the pendant is lacking. This was found long ago, at a place called the "Jumps," in the town of Clay, where the Onondagas annually met to renew the marks of the extraordinary leaps of a prisoner.

Fig. 172 is an earring of curious design, obtained by the writer on the Onondaga reservation. The elliptic center is in high relief, and has a lower notched border on each side. It is perfect, and the loop for attachment on the back is much like that of fig. 185, but more slender. This kind of loop belongs to several which follow, and is very nicely made.

Fig. 175 and 176 are much alike, differing in the number of pyriform pendants and the size of the rings. Fig. 176 seems perfect. Both belong to Onondagas, and their form seems rare. Fig. 177 is from the same reservation, and seems a triangular pendant belonging to a large earring.

Fig. 178 is unique. At the top is the half spherical ornament seen in some others, as well as the loop behind. Below this is a columellar appendage with three angular contractions varying the outline. It belongs to an Onondaga woman. Fig. 182 has the half spherical ornament just mentioned, with the usual loop. The writer obtained this pair at Onondaga, as well as fig. 185, which is of the same character but larger.

Fig. 179 is a very fine earring obtained by Mrs Converse. This form is rarely perfect. There are bosses on the lower corners of the large triangle, with a glass setting in the center. Below are three small pendants of a frequent form. Fig. 180 was obtained by the writer at Onondaga. The upper ornament frequently forms

a complete article, with or without a glass setting. It has the loop behind this diamond form, and a triangular pendant below. Both these have glass. It will be observed that there are holes for attaching three small pendants below. Fig. 181 has these pendants in place at the base of a similar large triangle, but is incomplete above. This has a glass setting, and belongs to an Onondaga woman. Fig. 184 belongs to the same person, and is elliptic in outline, with notched edges. It is imperfect. Fig. 189 is another of hers, also imperfect. It is pyriform and set with glass, and in general character is much like the upper part of fig. 183 reversed. Fig. 193 is hers also, having a common form of small pendant attached to a thick elliptic ornament by a small ring.

Fig. 183 is another of Mrs Converse's fine earrings, which seems perfect. A pyriform ornament above, with scalloped edges and glass setting, has a triangular pendant below. The top and bottom of the latter are embossed. Fig. 190 is also hers, and is unique in material, being of gold. It is a plain ellipse and of small size, increasing in thickness by successive stages.

Fig. 186 the writer got at Onondaga. It is triangular, with projections and bosses, and plainly incomplete. Fig. 191 he had from the same place. It is of a diamond form, with bosses at the angles, and is perfect. This is a frequent form, alone or in combination. Fig. 192 is similar, but plainer and with more openwork. Several of this frequent form he also obtained there, which were set with glass. Fig. 188 is the triangular base of an Onondaga earring, which has a single boss. Fig. 187 is a very pretty circular earring, set with glass, which an Onondaga woman gave to the Onondaga Historical Association.

One unique pair which the writer got at Onondaga is not figured here. The design is a small padlock, with the key attached outside. There is little probability that this was of Indian make, but most of the foregoing are of Indian manufacture. The article in question is of delicate and beautiful workmanship, but not characteristic, like those shown.

Fig. 200 is taken from one of L. H. Morgan's illustrations. It is a large silver earring, with an eagle above a large triangle. The

latter has scalloped edges, and below the base are three small pendants. Some of the Onondagas wear a plain globular eardrop attached to a ring.

In the *Annals of Binghamton* occurs the following passage regarding the triangular pendants, and what is probably the shield part of earrings, though the description is not clear. It concerned the recent Indian occupation of Windsor N. Y.:

> Deacon Stow, who grew up on these plains, mentioned two kinds of trinkets which he had often found, himself. One of a triangular form, about an inch from angle to angle, made of silver, and flat, of the thickness of a 10 cent piece, with a hole near one angle; supposed to have been worn for a pendant at the nose. Another, of silver also, made of a gridiron form, and about the circumference of a half dollar. Supposed to have been worn at the nose. *Wilkinson*, p. 143

Finger rings

Father Bruyas was accustomed to give his Oneida pupils in 1670, if they could repeat on Sunday what he had taught during the week, "pour recompense une corde de rassade, ou deux petits tuyaux de verre ou deux bagues de leton." These common beads, long bugle beads, and brass rings thus became very common, and upward of 30 rings have been taken from a single grave. The glass pipes or bugle beads are still found full 4 inches in length, though usually shorter. The rings in a grave may thus testify to faithful students. On the other hand, the missionary kept partially in view religious instruction. Beads might gratify taste, but might serve a more useful purpose if made into a rosary, with a cross or appropriate medal at the end. The rings almost invariably bore sacred symbols, and may have found place elsewhere than on the fingers. No Indian need buy them if he would be studious for a week.

These early rings are mostly of a rude and cheap character, but many are of good design and finish. Quite rarely one occurs of gold or silver, or even with a setting of small stones. At a later day they were almost entirely of silver, and often of a massive form. Some of these seem to have been made by the native silversmiths. They were found on all reservations, and the art furnished an Indian surname which still survives.

Mr Crisfield Johnson mentions that in 1796 there came to Buffalo Asa Ransom, "a silversmith by trade, who . . . went to work making silver brooches, earrings, and other things in which the soul of the red man and the red man's wife so greatly delighted." This was a profitable trade. In the Richmond collection is a box of tools and patterns for making silver ornaments, obtained from an Indian. Many white persons have seen the work done. Josiah Jacobs, of the Onondaga reservation, told the writer that his uncle *Ju-ne-gant-ha* "The tribe is very large," made brooches out of silver coins on a small anvil. These were hammered out, and then cut out by patterns. Punches and chisels were used, and his greatest difficulty was in setting colored glass in pendants and earrings. Other smiths are known by name to the writer.

In his report in 1852 Mr Morgan says of this:

> The most of the silver ornaments in later years have been made by Indian silversmiths, one of whom may be found in nearly every Indian village. They are either made of brass or silver, or from silver coins pounded out, and then cut into patterns with metallic instruments. The earrings figured in the plate were made out of silver, by an Onondaga silversmith of Grand River, under the direction of the writer. *Morgan. Fabrics etc.* p. 89

In the report of 1850 he said that hatbands, arm and wrist bands, earrings and brooches of silver, were principally of Indian manufacture. For some of these bars and sheets of silver were required.

Three bronze rings were found near finger bones in a bone pit on the Tuscarora reservation, probably a Neutral ossuary. Near these was a recent Canadian penny, probably dropped there in accordance with a local custom. When the Tuscaroras disturb bones or take anything from graves, they leave a small coin as an atonement or fair exchange. *Thomas.* Explorations, p. 513

Most collections made from recent Iroquois sites have these bronze rings, and those represented are selected from the many which have met the writer's eye. One of the most remarkable is perfectly plain, and is in the Hildburgh collection. It is a simple brass or copper cylinder, about $\frac{7}{8}$ of an inch long, and was found in Ontario county. Fig. 366 shows this fine example. Many articles which have a copper hue externally, appear yellow when cut.

The Jesuit rings are usually of brass or bronze, with an elliptic disk or seal, on which are many devices, sometimes almost effaced by use. I. H. S. with a cross above was a favorite; the heart, the letter L, the crucifixion, and sometimes a bust, appear on others. A moderate number will be illustrated. They are not often of large size, being given to young women and children as a rule. In New York none are as early as the middle of the 17th century, and few are as recent as its close. They came and went with the missions.

Cayuga county has been quite rich in these rings, and a moderate number have been figured and placed on record. Fig. 153 is one from a site near Fleming, where many have been found. There is a monogram in which M is the most conspicuous feature. A may be another part, or it may be an inverted V. As the heart above this is inverted, this may be the intention. There would thus be V. M., for Virgin Mary. Beneath the monogram is a flagon or pitcher. Fig. 343 is much like this, having the same monogram, but the fleur-de-lis takes the place of the other figures, and there is an ornamented border. It is larger than the last and came from the same place. There were five of these in one collection.

Fig. 314 has a fine full face and an illegible inscription. It came from the same place, with two others. Fig. 316 is also from Fleming, and shows a full face, with a small cross in the drapery on one side. Fig. 317 was found with the last, and has a bust with mitered head. A small cross appears. Fig. 324 is from the same place, and somewhat corroded. Though there seems to be one large cross and three small ones, it is probable that the correct rendering would be one large cross above I. H. S., as in other cases. The same may be said of fig. 329, which was found with the last, but is much smaller.

Fig. 325 is another of these Fleming rings, having I. H. S. in plain roman letters, surmounted by a cross with expanding limbs. There are three small crosses below, and an ornamental border. Fig. 330 shows another from the same place, the design of which is a large L, including a small heart and surmounted by a crown. This fine ring has an ornamental border. Fig. 334 is smaller, and has the L but not the other emblems. This is from Fleming, as well as

the next. Fig. 338 represents the crucifixion, with a bleeding heart on each side.

The following three are from the same place. Fig. 354 has a crown above and a star below. The intervening figure shows clasped hands. There were two of these, showing a neat border. Fig. 355 has the Virgin and Child, with a cross above. Fig. 347 has a heart-shaped signet, with a neat border inclosing a large A. No others have been observed like this.

Fig. 333 is from Scipioville, in the same county, and is much like fig. 330. Both have the fleur-de-lis beneath the L. Fig. 352 was picked up by the writer by a Cayuga grave, where many others had been found. At first sight there seemed to be an unfinished L, but a comparison with some to follow will show that it is the base on which the large heart was often placed.

There follow several from the McClure farm in Hopewell. Fig. 319 is a small ring with a head in profile. Fig. 320 is another fine ring, with a Maltese cross within a circle. Fig. 331 has an angular signet, with a plain border around a large L and a small heart. Few rings occur on this site.

Bronze rings have been abundant on some Oneida sites on Oneida creek, but most have disappeared. Two only will be mentioned now, both being from Munnsville. Fig. 321 has I. H. S. in plain characters, with a cross above. Fig. 358 is a small ring, with a pair of compasses inside of a ring.

Quite a number have been found at Brewerton, but of most of these neither figures nor descriptions have been secured. Fig. 315 has the unusual feature of a head with the face toward the outer edge. The work is rude for there is a great difference in these rings in every way. Fig. 359 has a very small signet for the size of the ring, and on this are circles and lines variously arranged. In 1900 there were taken from one grave in that place, 35 of these bronze rings, tied together with buckskin.

Dr Hinsdale obtained some rings in Pompey. Fig. 278 is one of these, and is a large pewter ring, with a double line of small projecting beads of the same material. Fig. 279 is a fine specimen,

with the crucifixion, and figures seated on either side. Fig. 323 is another fine ring, with an inside circle, cross and I. H. S.

The following are also from Pompey. Fig. 327 is a large and fine ring from a grave on the Williams farm, obtained in 1886. It has the cross and I. H. S., but in rather unusual form. Fig. 346 has a small head.

A number which follow are from the site of 1677, in Pompey. Fig. 313 has a king's bust and scepter. It is large. Fig. 326 is also large, and has the I. H. S. and cross. Fig. 335 has a large heart poised on a curved base, and with a border of curving lines. Fig. 336 is a smaller variant of the last, but the ring proper is more elaborate. Fig. 341 is of gold and has the Greek monogram for Christ. This is unique. Fig. 345 has a St Andrew's cross within a circle, and with dots between. Fig. 348 has characters of uncertain meaning, and the same may be said of fig. 350. Fig. 357 represents the crucifixion. This site has yielded so many rings and crosses as to suggest the thought that the Christian converts might have made it their home.

Of course Indian hill, the seat of the first Onondaga mission, would not lack articles of this kind; and a number follow from the Onondaga fort of 1654. Fig. 318 has a full face and a large key. Fig. 322 has the I. H. S. and cross while the ring part is quite elaborate. Fig. 328 is small, with I. H. S. and the cross. There is a border of dots or stars. Fig. 332 has a rather rude seal, and is small. The large L is not well done, and there may be a rude crown above it. There is a small heart and the ring part is elaborate. Fig. 340 has a small seal with a medium sized heart resting on the usual base. Fig. 342 has lines of indefinite character. Some may be intended for palms. Fig. 344 is a peculiar silver ring. The central portion is a quatrefoil, intersected by a four pointed star. In the center and at the ends of the quatrefoil are either pearls or small lustrous stones, some remaining. It is of very unusual character. Fig. 349 has characters suggestive of a Greek monogram. Fig. 351 also lacks definiteness, but was probably intended for a large heart with inclosing lines. Fig. 353 has a design suggesting either a cup or paten, perhaps with a crown above. Fig. 356 has a good figure

with extended arms, and a halo above the head. If intended for the crucifixion, the cross does not appear.

All those included in the foregoing paragraph have been recently gathered from this old town whence hundreds have been taken before. Mr Clark said that De Witt Clinton had a gold finger ring from this place, procured at the time of his visit.

Fig. 339 was sent to the writer by the late Rufus A. Grider, but the design is somewhat indistinct. A medium sized heart appears above the usual base, and there are other figures. This is from the Mohawk valley, where the old mission sites have yielded many. The writer regrets that he could not have given more attention to this class of articles, in visiting several notable collections, but time would not allow of this. Though of small size each one has minute details which must be preserved, and much time is often required to make out the design on account of corrosion. A great many, quite distinct and as full of interest, could doubtless be added to those here portrayed.

Fig. 364 is an illustration of a novel ring. A coil of iron wire several times encircled a finger, preserving the bone and as much of the flesh as came in contact. This was found in Fleming. Fig. 368 is a small coil of copper wire which may have served as a ring. This was found at Brewerton by Dr Hinsdale.

When the Iroquois made silver fashionable, bronze rings disappeared, and for two centuries their silver successors have fairly well held their place. They have disappeared more by being worn out than through a change of fashion, none having been made for many years. Fig. 363 shows one the writer bought of an old Oneida woman. The general form is well preserved, but, if there were ornamental details, they have been worn away. Mrs Converse was fortunate in getting two fine examples here illustrated from her drawings. Fig. 360 has two hands clasped over a heart. Fig. 361 has two hearts united. The symbolism is evident in both cases, though the Indians possibly may have cared little for this. Fig. 362 is the largest silver ring the writer has seen, and, as it was probably worn only on great occasions, it is in fine preservation. It was

given to Albert Cusick's mother by her second husband *Sah-go-hone-daté-hah*, "The one that spares another," a Tuscarora chief. When seen by the writer it had a string of 96 beads of mourning wampum attached to it.

Among the Onondagas *Kă-ne-kă-ah*, "Round thing," may mean a simple ring. *En-neah-hah'-sen* represents one for the finger. The former word is used for a hoop, but not for a wheel.

Fig. 383 is in Theodore Stanford's collection in Munnsville. It has an octagonal seal, containing a flaming heart beneath what may be an elongated star or a radiant cross. The ordinary rings are found on the Oneida sites about Munnsville, but most of those collected have already disappeared.

The five following rings are from Pompey, dating between 1655 and 1680. Fig. 389 has no emblems, but is of bronze. It had a setting which has been lost. Fig. 390 shows a person supporting the dead Christ. Fig. 391 may have been intended to show the letter L, but, while the work is sharp, the design is doubtful. Fig. 392 has stars, crossed arrows, etc. Fig. 393 has a circle, lines and dots. Fig. 394 is in Mr Frey's collection. There are human figures on each side of the crucified Christ.

A plain pewter ring was found at Hoffman's Ferry, which was a camping place. As these were common during the past century, the age and use are both uncertain, but, from the location, it seems to have had an Indian owner. Surface finds of this kind are subject to doubt.

Silver crosses

The finest foliated silver cross, used by Indians, which the writer has seen, was found on the banks of the Maumee river, Ohio, and was exhibited at the Pan-American Exposition in 1901. This is 13½ inches long and 8½ inches wide. It weighs 8 ounces, and is a Roman cross, each limb having foliated ends. One nearly as large, and perhaps as heavy, belongs to Mr Walter C. Wyman of Chicago. It is 12¼ inches long, and 8¾ inches wide, and is more highly ornamented than any of these large crosses which the writer has seen. Three limbs have the usual foliation, but the upper one terminates

this abruptly. At the intersection are four ornamental quadrants, forming a quatrefoil with the surface ornamentation. The base bears longitudinally the name of the former owner, *Pandikaikawa*, an Ottawa chief. Two other fine crosses are in the same collection, but they are of a different character. An account of these was given in the *Chicago Evening Post*, Oct. 8, 1898.

Two much like this, but without the central quadrants, were figured and described by Mr Charles C. Jones in the *Smithsonian Report* for 1881, p. 619. The drawings are half size, and show both faces of each cross. In these the rings for suspension remain. One cross is $8\frac{3}{8}$ inches long by $7\frac{1}{2}$ wide; the other is 8 inches long by $7\frac{1}{4}$ broad. They were taken from a grave-mould at Coosawattee Old Town, Murray co. Ga., in 1832, and are fine examples. Mr Jones said: "Indian relics were found associated with them. We incline to the opinion that they may properly be referred to the expedition of Hernando de Soto." As will be seen, their true date is the latter part of the 18th century, or possibly later. In New York and Canada they were in use but a few years ago. To show how little these were thought of as symbols, it may be said that on one of the Georgia crosses the owner had engraved an owl and a horse's head. Morgan said that birds and beasts were sometimes engraved on them, and two had the name of Montreal stamped in the center. The writer obtained all his double crosses from one pagan family.

Fig. 198 is from Morgan's report in 1852, and is a reduced figure of a cross 10 inches long and 6 wide. This he had from a Cayuga at Grand River reservation in Canada. It is of the common form. Fig. 209 is a smaller one from the *League of the Iroquois*, the size of which is conjectural, but it is apparently about 5 inches long. In the center it approaches the character of Mr Wyman's fine Ottawa cross.

Fig. 205 is a reduced drawing of a fine silver cross in the Richmond collection, which is $9\frac{3}{4}$ inches long and $7\frac{1}{4}$ wide. The ring for suspension remains. Each limb is foliated, and the name of Montreal is stamped in the center. The writer did not learn its history, but many seem to have been made at Montreal for general trade purposes, and they are usually without any religious symbols

on the surface. They may be considered mere ornaments. This also appears from Sir William Johnson's journal of Sep. 17, 1761, when he left some at Detroit for purposes of trade. They were to be sent to Mackinac. He said: "I counted out and delivered to Mr Croghan some silver works, viz, 150 earbobs, 200 brooches or breast buckles, and 90 large crosses, all of silver, to be sent to Ensign Gorrel." *Stone.* Johnson, 2:464

The smaller silver crosses are usually ornamental, and have from one to three crossbars. Those with two are most common, and have been widely distributed. A fictitious antiquity and rarity have been ascribed to these under the name of the patriarchal cross. All of the writer's examples he had of the Onondaga Indians, as stated before.

Mr David Boyle figured a fine double-barred silver cross from Beausoleil island in the Georgian bay. It is like fig. 207 but larger, being 4⅛ inches high. Two others were with it. He said of this:

Double-barred crosses of this kind are now, it seems, unknown in connection with Catholic worship, and it is somewhat singular that, since we received these relics of the old Hurons, another one almost identical in size and pattern should have found its way to our collection from the Northwest, where it was picked up during the late rebellion. . . Regarding the peculiar form of cross from Beausoleil island, Dean Harris of St Catharines, writes: This small, dual cross is permitted to be worn only by patriarchs of the Latin church. It is also sometimes carried as a processional cross, and, as Richelieu was bishop and cardinal, it is possible that he used such a cross either as pectoral or processional. In all probability these ornaments were sent out to Canada during his *régime*, and, receiving the blessing of the priest among the Hurons, would have served the double purpose of being ornamental and of being used in devotion." *Boyle*, 1891, p. 64

As Richelieu died in 1642 and the Hurons were overthrown at the close of that decade, while this form of silver ornament did not come into use among the Indians till a century later, this ingenious conjecture fails; but the writer has shown that the double-barred crucifix was used in New York in the 17th century. The makers of mere ornaments since then had little care for the original use or meaning of articles, so long as they were attractive to the eye, and would sell.

Some Indian chiefs have been represented wearing the triple cross, but otherwise the only one reported and figured is Mr Wyman's. The central bar of this is longer than the others, and all the limbs are foliated. Tasteful open work adds to the effect, but the general character is that of similar double crosses. This form has been called the pontifical, but is purely ornamental in design. The figure furnished is $3\frac{3}{4}$ inches long by nearly $2\frac{1}{4}$ in the widest part. Like his others, this is from a Michigan grave.

Mr Wyman has also a fine silver double cross, $4\frac{7}{8}$ inches long and $2\frac{1}{2}$ broad, with a ring for suspension. The base is broad, and the ends of the limbs foliated, the upper crossbar being shorter than the lower. This is a common feature. Crosses of this form and size have been found in many places, and he has several. Fig. 207 is a smaller one of this form, from the Rose hill farm, east of Geneva, N. Y., and is of actual size. Though made for suspension, the broad base would allow a standing position. These are like the Canadian crosses mentioned above.

Fig. 203 shows one of several from the Onondaga reservation, belonging to the writer. They are smaller than the last, and of a slightly different form. The Indian owner had over a dozen of these, and they were common among western Indians. Fig. 201 is a cross of the same form in the collection of Mrs Converse, probably made from the same pattern, but with surface tracery. There were earlier double crucifixes of the same general form from which the merely ornamental cross may have been derived. There was a small ring for suspension, now usually lacking.

Fig. 212 is an ornamental double cross with several openings. All the limbs are foliated, and there is a ring for suspension. The general character is that of Mr Wyman's triple cross, but it is smaller. The writer had this from an Onondaga squaw, from whom a friend obtained its counterpart. The form seems rare, and both sides are ornamented.

Small silver Roman crosses seem much rarer, and none have been reported perfectly plain. Fig. 206 is of one with scalloped edges, from East Cayuga, a site occupied 150 years ago. Fig. 202 is of another which the writer bought of an Onondaga Indian in 1901.

Though nearly the same in size and design, they have not the same number of crenulations. Another was found at Portsmouth O., but they are everywhere rare.

Crosses and crucifixes of other materials

Silver articles, as a rule, were in little use by the New York Indians in the 17th century, but other materials naturally overlapped the introduction of these. Copper, brass and bronze were at first the favorites for ornament, but pewter or lead was used, and even iron had a place. Fig. 196 is a cross of lead from the McClure site in Hopewell, commonly known as *Onaghee*. Circular projections tip the three lower limbs, and it is probable that a similar one has been lost from the top, where the customary perforation would have weakened it. It is a good deal battered, but there seems to have been a human figure on its face.

Crucifixes have often been found on nearly all Iroquois sites of the last half of the 17th century. The coming of the Jesuit missionaries in 1654 marked a new era of this kind, though French and Huron captives may have brought some earlier, or they may have been among the spoils of war. Previous to that time most European articles came from the Dutch. Mr Clark noticed the finding of "a curious brass image" in Pompey, just before his history was published. He also said:

> A valuable cross of gold was several years ago found in the west part of Pompey, and was sold for $30. The significant I. H. S. was upon it. Numbers of crucifixes and crosses have been found. Brass crosses are frequently found, with those letters, and the initials of the Latin title put upon the cross at the crucifixion, I. N. R. I., and so are medals of the same metal. *Clark, 2:273*

After mentioning a brass dial plate and a paint box of the same metal, Mr Clark speaks of "another more perfect one beautifully wrought," as though meaning another box. His figure, however, is of the two sides of a crucifix, with a loop at the top and a fluted base. The obverse has Christ with extended arms, and a halo and I. N. R. I. above the head. Under the feet are the crossbones and skull. This side has a beaded border. On the reverse angels crown

the Virgin Mary, over whose head is the dove, and under her feet the skull and crossbones. *Clark,* 2:280. This is from the fort of 1696.

On adjoining lands, Mr Clark said, "brass crosses have frequently been plowed up, and some of the most perfect and highest finished ones have over the head of the Saviour the letters I. N. R. I. Most of the crosses found in other places have the letters I. H. S." *Clark,* 2:281. This was more than 50 years ago, and they are occasionally found yet, as well as on earlier sites.

A few representative early forms will be illustrated, and the reader will readily see the difference between these, with their many symbols, and the ornamental forms already described, in which these are lacking. Most of these are either of brass or lead.

Fig. 194 is the obverse of a fine brass crucifix belonging to the late Hon. George S. Conover of Geneva N. Y. He had several of these. This has a beaded border. Christ has his arms extended, a halo and I. N. R. I. are above his head, and the skull and crossbones beneath his feet. The reverse has the Virgin Mary with the moon beneath her feet, and the dove descending from above. On the arms on this side are the words IESVS MARIA. Mr Conover had this from a burial place on the Read farm, lot 32, town of Seneca. Mr Conover said: "As many as 50 crosses are known to have been found in this burial ground, and probably a great many more, as in former times, when the field was plowed, it was not an uncommon thing to find a number of crosses and other emblems with religious devices."

Fig. 217 is a fine brass crucifix from the Rose hill farm, east of Geneva N. Y., obtained by Dr W. G. Hinsdale. The obverse has Christ with the usual emblems, but with the head bent down. On the reverse are the Virgin and child, with emblems near the ends of the arms. The pointed top of this crucifix is perforated, and forms nearly a true pitch.

Fig. 214 is a brass crucifix from Cayuga county, having a beaded edge. The only emblems accompanying the figure of Christ are the halo and inscription above the head. The obverse of this is not recalled.

Fig. 195 is a brass crucifix obtained by Dr Hinsdale in Pompey. The head of Christ is bent unusually low, and the loop rises in a triangular form from the cross. Fig. 204 is a small crucifix from Pompey, the limbs ending in trefoils. Each of these includes a small circle, but the general design has become obscure through use. Fig. 211 is a beautiful brass cross with several perforations. The ends of all the arms are ornamented, and I. H. S. appears on the upper arm. Dr Hinsdale met with this in Pompey. It is an unusual form.

Fig. 213 is from a figure furnished by Dr Hinsdale of a curious bronze crucifix belonging to a boy in Pompey. It has two crossbars, and each limb is angularly expanded at the end. On the obverse the arms of Christ are extended on the upper limbs, I. N. R. I. appearing above his head. SALVATOR is on the lower crossbar, and MVNDI on the lower limb. On the reverse the Virgin occupies the center, with the sun above her head. MATER is on the lower crossbar, and DEI on the lower limb. With this was fig. 219, a fine but small brass crucifix with each arm terminating in trefoils, each of which incloses a human face. Christ and the inscription I. N. R. I. are on the obverse; the reverse has two angels crowning the Virgin Mary, and above her head is the sun.

Fig. 216 is from the Onondaga fort of 1696 and is much like fig. 213, having two crossbars and similar expansions at the ends of the arms. The design is somewhat obscure and no letters appear. Fig. 218 is from the same site. The figure of Christ is on the obverse as usual. The reverse shows the descending dove, the Virgin, and the angels on the crossbar.

Fig. 208 is a small cross from the Mohawk valley, figured by Mr S. L. Frey. The limbs terminate in trefoils, and there is some surface decoration, this being a mere ornament of comparatively recent days. It is of silver, and the loop at the top is broken. Fig. 215 is also one of Mr Frey's illustrations, but is an older article. Both sides are adorned with emblems, the obverse having I. N. R. I., the crown of thorns, nails and hammer, ladder, skull and crossbones; while the reverse has the heart in the center, the spears beneath, and other emblems on the limbs.

Fig. 210 is a brass crucifix from Munnsville, of a larger size and with more emblems, but with much the same arrangement. One end of the crossbar differs from the other.

Fig. 158 shows both sides of a thin brass crucifix found by Dr Hinsdale among the salt vats near the Ganentaha spring, the seat of the French mission house of 1656. It is of antique appearance, but in fine preservation, and the natural impulse is to connect it with this mission. The French inscription strengthens this. On comparison with recent memorials of modern religious missions, the writer is inclined to ascribe it to our own day. The obverse has Christ on an inscribed cross, and with the knees unusually drawn up. Each limb of the cross terminates in a trefoil outline, and these each include two or three small bosses on the obverse. The reverse is quite plain, and has SOUVENIR on the short, and DE MISSION on the long bar of the cross.

In the Hildburgh collection is a crucifix in which the lower limb but slightly exceeds the other three in length, these being alike in extent.

Mr Henry E. Kingman, of Owego, kindly sent an account of two brass crucifixes he found at that place in 1901, none occurring there before. One was perfect; the other broken at the base. The robed figure mentioned is the Virgin, and the general character like some before described. He said:

> On one side is the Saviour crucified, with a skull and crossbones at the bottom. Above Christ's head are the letters I. H. S., but these letters are not distinguishable on the perfect cross. On the broken one they can readily be read. On the reverse is the Saviour in his robes, while above his head is a crown, and above the crown a dove. On either side of the head is a cherub. The crucifix is $1\frac{3}{4}$ inches long from the tip of the loop to the base, and $1\frac{1}{8}$ inch in width. The other crucifix is wider.

A fine but small brass crucifix is from Pompey, having an extreme length of $1\frac{1}{2}$ inches. It is foliated in a peculiar way. There are semicircular projections on each side of the limbs, but the intermediate projection is long, narrow and pointed. On the obverse is a figure of Christ with extended arms. The reverse has the Virgin, the angels and the dove. Fig. 381 is of this.

Mr Stanford, of Munnsville, has a cross of some size, with expanding arms, suggesting the Maltese cross, but with the proportions of the Roman. Crosses and crucifixes seem rarer on the Mohawk and Oneida sites than farther west. Those of Onondaga have been most prolific, but they are now everywhere rare as compared with those found by early settlers, and are valued accordingly.

Coins

The most common coins found on Iroquois sites and used for ornaments are the liards of the 17th century. The value is about half that of the English farthing. They were at first a silver coin, but in the reign of Louis 14 became restricted to copper. On the coin the date follows the inscription, and shows several issues. In numismatic records they are described as dated in 1656 and subsequently. On Indian sites they are perforated for attachment or suspension, and are often too much worn to make sure of the date; but in New York this seems always during Louis 14's reign. Those reported as having the date of 1650 may be safely referred to 1656, a slight erosion affecting the date. In Cayuga county 44 were found in a pewter mug, which had suffered only by early use. All were of the middle of the 17th century.

The obverse has a crowned bust, with the inscription in capitals: "L. XIIII, Roy. de. Fr. et. de. Na.;" reverse, "Liard de France," across the surface. On the lower part are three fleurs-de-lis, and above these a letter, showing at what place they were made, for there were several. A stood for Paris, B for Rouen, and examples of both these are found at Indian hill, Pompey.

In Onondaga county they seem restricted to the place first visited by the French in 1654, and where the Onondagas remained till 1682. There they often occur. Fig. 303 shows both sides of one found at that place, which has two perforations. Fig. 304 is another with but one hole. Fig. 297 is from the same site, and has R instead of Roy. This has two perforations.

The writer has since had in his hands liards from Pompey of the D and E issue, the former being from the Lyons mint.

A smaller coin has a head on the obverse, face to the left, with OVR. D. C. D., with the rest indistinct. Fig. 396 is of this. On the reverse are four fleurs-de-lis, the upper one above a castle tower. Part of the inscription is AN. 1639. DOVR. One better preserved is in Theodore Stanford's collection, appearing in fig. 397. On the obverse is the King's head. LOVS remains on one side, and FR. ET. NA. on the other. The reverse now barely suggests the lilies. The date is 1640; then comes a cross, and then the letters DOVR. DE. TOV. Both these are of copper, and they are slightly wider than our present cent. No coins of older date have been reported from New York Indian sites.

Honorary medals and gorgets

Though the Indians preferred substantial presents, they were not insensible to honorable distinctions. They thought powder and ball a better means of defense than the king's arms, but tokens of personal rank they valued. So that Robert Livingston made a shrewd suggestion on returning from Onondaga in 1700, when he recommended to Governor Bellomont:

> That his Ma^tys armes be sent to all the 5 Nations and put up on each Castle, and if your Lord^p thought fit, that some of their Chief Sachems had a badge or the King's armes cut in silver to hang about their necks upon solemn days, I presume it would be acceptable. *O'Callaghan*, 4:651

Whether this was at once done does not appear, but Queen Anne did not forget the wise suggestion. At his first conference with the Five Nations, in August 1710, Governor Hunter introduced a new feature. The queen had been greatly impressed by the visit of the New York Indians to London, and took a warm interest in her forest allies, regarded by her as subjects. On this occasion Governor Hunter said:

> Her Maj^ty has sent them as a pledge of her protection, and as a memoriall to them of their fidelity, a medall for each Nation with her Royall effigie on one side, & the last gain'd battle on ye other, which as such she desires may be kept in your respective Castles for ever, she has also sent her Picture on silver twenty to each nation

to be given to y^e^ Chief Warriors, to be worn about their necks as a token that they shall allwaies be in a readinesse to fight under her Banner against the common enemy. *O'Callaghan.* Col. Hist. 5:222

Very proud, doubtless, were these hundred warriors, but the custom begun by the English two centuries ago, and by the French still earlier, has come down to our own day.

In July 1721 the governor of Pennsylvania presented the Seneca chief *Ghesont* with a gold coronation medal of the king, charging him "to deliver this piece into the hands of the first man or greatest chief of the Five Nations, whom you call *Kannygoodk*, to be laid up and kept" as a token of friendship between them. *Hazard.* Minutes, 3:130

Possibly the plate mentioned in Penhallow's *Indian Wars* was silver medals or badges. The Six Nations and Scaghticoke Indians were well received in Boston in 1723, and the lieutenant governor "gave each of them a piece of plate, with figures engraven thereon, as a turtle, a bear, a hatchet, a wolf, etc., which are the escutcheons of their several tribes. And the more to oblige them to our interest, they had a promise made of one hundred pounds a scalp, for every Indian that they killed or took." *Penhallow,* 1:101

In the *Canadian Antiquarian and Numismatic Journal* for January 1899, Mr R. W. McLachlan gave an account of medals awarded to Canadian Indians. In this are many interesting particulars, the author being a specialist in these, and putting many early notices in an accessible form. The following observation is of general interest:

Size was of great importance to the red man, who was no admirer of miniature medals. Some were struck exceeding three inches in diameter. These were for the great chiefs, for there were smaller medals for lesser lights. . . While we may be inclined to believe that more minor than great medals were distributed, as there could not help but be more lesser than "Great Chiefs," this fact is not borne out by the number of existing medals; the larger medals are by far the more abundant. This may, in a measure, be accounted for by the fact that the minor chiefs more readily parted with their medals; and that, too, at a time when there were few collectors in the country to secure and hand them down to posterity, while the great chiefs' medals passed from father to son as an insignia of office. . . Old silversmiths relate that, as late as 60 years ago,

the Indians used to bring in their medals to have them made over into gorgets and armlets. *McLachlan*, 2:4

Mr McLachlan quotes the earliest mention of medals in Canada, in 1670-71, from volume 4 of the *Archives* of that country:

A savage of the Sault, (Caughnawaga), named Louis Atouata, godson of the King, who preserves as a precious thing the medal of which his Majesty made a present to him.

A medal was struck about 1670, for the friendly Indians of Virginia, but had no relation to New York, while most French medals came there at one time or another.

Mr McLachlan also describes a medal of 1693, in five sizes. The obverse has "the head of Louis 14, with flowing hair, and on the reverse those of his son the dauphin and the three sons of the latter." But one original is known, but restrikes have been made. This writer also quotes an account of medals used in Canada in 1723, and placed after death on the biers of Indian chiefs.

In another paper in the *Proceedings of the American Numismatical and Archaeological Society* of New York, 1883, p. 17-20, he gave two quotations not found in O'Callaghan's New York colonial documents. Governor Vaudreuil wrote thus Sep. 21, 1722:

I have received the letter with which the council has honored me, and the twelve medals bearing the portrait of the King; eight small and four large. I have continued to be careful not to be too lavish with this favor among the Indians, and to give them only to those who by their services to the nation deserve them, and to those whom I desire to bind to our interest by this mark of honor.

The reference is to an established custom. He quotes also from Beauharnois under date of Aug. 25, 1727:

Since the death of M. de Vaudreuil, the Rev. Father Jesuits have not asked medals for the chiefs of the settled Indians, for whom it was customary for them to ask some. The Rev. Father de la Chasse, to whom the Marquis de la Vaudreuil had given one, tells me it is absolutely necessary to provide some more. I have received proof of this. The Indians from above, when they come down to Montreal, would not relieve me from promising them to several who have served us well among their tribes. I pray you to enable me to satisfy these savages, and to send me a dozen small medals and six large ones.

On the same subject Governor Beauharnois wrote again, Oct. 15, 1732, to the Count de Maurepas:

I thank you, My Lord, for the twelve medals you had the goodness to send me for the Indians. His Majesty may be assured that I will make the most of them, and that I shall not distribute them except to Chiefs, whose services and attachment to the French will be known to me. As there are many such to whom I have promised such a token of honor, and as the adventure of our Iroquois and Hurons against the Foxes places me under the obligation of giving a few to the principal Chiefs of the expedition, I beg you, My Lord, to order that some be sent me next year, so that I may be enabled to invest them with this mark of honor, which also renders them more respectable among their people. *O'Callaghan.* Col. Hist. 9:1036

Sir William Johnson gave "three silver gorgets to three of the principal warriors" of the Ganuskago Indians, at Fort Johnson, Feb. 26, 1756. At the same place, July 12, he "put medals round the necks of the Shawanese and Delaware chiefs, and also to the chief Sachem of the River Indians, accompanied with the usual exhortation, also gave silver Gorgets to some of their head Warriors." *O'Callaghan.* Col. Hist. 7:160

He held a council at Onondaga lake that year. When the Onondaga speaker had concluded his address, July 2, "Sir William then rose and put a medal about the Speaker's neck and declared him a Sachem of that Council, charging him to be steady to his Majesty's interest." *O'Callaghan.* Col. Hist. 7:149

To take off the medal was to renounce friendship or allegiance, and this the French encouraged when English medals were worn. A Seneca chief, who wore an English medal in 1775, said to Governor Vaudreuil: "I tear off the medal of the King of England, which hangs from my neck and trample it under foot." *O'Callaghan.* Col. Hist. 10:378

The year before, the La Presentation Indians had sent to M. Duquesne "the medals the English had presented to some of that village who had furtively assisted at the Council at Orange." *O'Callaghan.* Col. Hist. 10:263

Two Iroquois chiefs gave up their English medals to Vaudreuil in Aug. 1756. Of another he said: "I have appointed this Onon-

daga a chief, and have decorated him with the King's medal, in consideration of the proofs he has afforded me of his fidelity," the Onondagas being then almost equally divided. In December of that discouraging year to the English, an Oneida chief gave up two English medals to the French, saying:

Father. We can not retain two medals which we have formerly had the folly to accept from our brethren, the English, as a mark of distinction. We acknowledge that these medals have been the true cause of our errors, and that they have plunged us into bad business. We strip ourselves of them; we cast them from us, in order not to think any more of the English. *O'Callaghan.* Col. Hist. 10:513

The gorgets are not usually described, but many were given to the Five Nations and Delawares. The following description, given to the French in 1758, seems that of a well known medal:

The Governor of Philadelphia has held a great council with them, at which he has distributed a great quantity of belts, calumets of peace, and more than 40 silver gorgets. A chief of the Five Nations has carried to the Commandant of Niagara one of those gorgets on which was engraved a Sun, with an Indian and a Squaw feeding a fire, and an Indian smoking a great calumet with an Englishman under the shade of the tree of peace. *O'Callaghan.* Col. Hist. 10:839

An affecting incident took place soon after Sir William Johnson's death. Some Onondagas were at Johnson Hall, Sep. 12, 1774, and the Bunt's eldest son produced the various marks of the baronet's regard.

Then (according to the old custom after such an event) he laid them down consisting of a silver hilted sword, laced hat, medals, flags, &c. before Col. Johnson, observing that his dear friend, being now no more, these things must be restored to Col. Johnson for his disposal. Then a noted Chief and particular friend of Sir Wm Johnson's arose, took off his medal &c. and did in like manner as the former, as did some others. . . Then Col. Johnson put the medals &c. about their necks and returned the several articles they had surrendered. *O'Callaghan.* Col. Hist. 8:498

A similar thing occurred at the Canandaigua conference, held by Col. Pickering in 1794. There was a condolence at the opening. Red Jacket said they returned gifts to the donors when any one died,

and he returned to the commissioners a silver gorget which had belonged to a dead chief, and which had been given him by the United States.

These were not considered equal in value to medals. In 1741 the Marquis de Beauharnois invested an Iroquois chief of the Sault with a gorget, till he could give him a medal as a mark of rank, but all medals had not this character.

The finest of the English silver medals which the writer has seen belonged to Mr John Jones, of Baldwinsville N. Y. It came to him as an heirloom, and was said to have been from the body of an Indian chief. The history is not very clear. Though it has been roughly handled by children, it is in good preservation, owing to the deep border and high relief. On one side is the British coat of arms, with the usual mottos. On the other is a fine head of George 2, facing the left. The inscription around the border is GEORGIVS. II. D: G: MAG: BRI: FRA: ET. H: REX. F:D. in roman capitals. As this monarch reigned from 1727 to 1760, the medal would come between these dates, and probably during the old French war. It is 1⅞ inches across, and is quite heavy. Fig. 280 shows the obverse of this.

In *American Colonial History illustrated by Contemporaneous Medals,* this issue is described:

Obverse: GEORGIVS II. D. G: MAG: BRI: FRA: ET: H: REX: F. D. Bust of the King, laureate, facing the left, without drapery. *Reverse.* The Royal Arms within the Garter and with supporters, helmet, crown and crest; upon the Garter, DIEU. ET. MON. DROIT. Silver, cast and chased, with loop and ring. Size 30. *Betts*, p. 177

The medal here represented accurately corresponds with this description, and must be considered one of this issue. American medalists are of the opinion that these are the 30 brought to New York by Sir Danvers Osborne in 1753, for distribution to the Indians, reference to which is made in a following paragraph. Everything agrees with the family tradition.

There is another familiar Indian medal of an earlier date, and about the size of a silver dollar, which has been found in New York. It will be observed that Indian medals not found here, or which

have no connection with New York, are not illustrated in this paper. Several colonial and Canadian medals are thus passed over.

The medal just referred to was found when the Erie canal at Oriskany was enlarged in 1849. Some graves were opened, containing 10 or 12 skeletons, with ornaments and medals. On one was a head of George I, with the title, George, king of Great Britain, in capitals. On the reverse was an Indian behind a tree, with bow and arrow, shooting at a deer. This part of the account is clear, but some other statements are erroneous. For instance, a medal of George I is said to have been dated in 1731. The other medals were dated from 1731 to 1735. Some of the later Georges used the same design.

Besides one of these medals from the lower Mohawk valley, somewhat indefinitely reported, Mr Conover described one from the Read farm in Seneca, which was taken from the Indian cemetery there, and from which he deduced its age. He described it as "a copper or brass medal of about 1½ inches in diameter. On one side of this medal was the representation of an Indian with a bow and arrow in the act of shooting at a deer, a tree being between them, and the rays of the rising sun being alongside of the top of the tree. On the reverse was a medallion likeness, and around it and near the edge of the circumference the words, George, king of Great Britain. As the reign of George I was from 1714 to 1727, and such tokens were only presented to those Indians who were of importance among their own people," and this could not be secured in youth, he inferred that it must have been given to an old man who was buried with it in the first half of that century. As the medal might have been preserved in the family, the conclusion does not follow as to the date of the cemetery, as Mr Conover's farther statement shows:

> There has also been lately found what at first seemed a small lead bullet, which had been flattened, but, upon its being cleaned from the dirt and corrosion, it proved to be a leaden seal, such as was used in colonial times, and which had the date of 1767 cut on its face.

In the above account Mr Conover should have said the obverse had the head of the king, but this is a mere technicality. In the

series of newspaper articles by him, from which this is quoted, he recorded many things worthy of preservation. A careful and judicious writer, he did much excellent local work.

One of these figures of medals appears in Miner's *History of Wyoming* from an example found on the Susquehanna in 1814, and now said to be in a collection at Carbondale Pa. Fig. 289 is from his picture of this, but, though he said it bore the date of 1714, this does not appear. In that year George I began to reign. Mr McLachlan writes:

> In 1859 two medals were turned up among other Indian remains, on the banks of the Ohio river. The older of these has on the obverse the head of George 1, and the other the head of George 2. The reverses of both have a representation of an Indian aiming at a deer.

More of this class of medals have been found in Pennsylvania and Virginia than elsewhere, and they are divided into these two reigns. As all may occur in New York, a brief description of some of these is given. They are of brass.

One like the medal described by Miner, but smaller and found in Virginia, is now in Wilkesbarre. Another, found at Tunkhannock Pa., has a large Indian throwing a spear at a small deer on the left. This is quite thick. Another Virginia example has on the obverse a laureated head of George I facing the left. The inscription is Georgius—Mag. Bri: Fra. et. Hib. Rex. in capitals. Reverse: Indian at right, nearly erect, bending forward under a tree which follows the curve of the rim, holding a bow, etc. A running deer under a tree at the left. *Betts*, p. 83

Another Pennsylvania specimen has the king's laureated bust to the left, in armor. The inscription is Georgius II. D. G: Mag. Br. Fr. et. Hib. Rex. in capitals. Reverse: Indian at right under a tree, shooting at a deer running away under a tree at the right. *Betts*, p. 84

This should probably be the left, as in the other cases, for the reported arrangement would not suit the requirements. In another medal it is possible the spear described may have come from a wearing away of the bow, changing the appearance. As no figures have been given, the descriptions are followed.

In a letter to the writer Mr McLachlan says:

Another medal for the Indians is referred to in an article in the *Historical Magazine* for September 1865, page 285, which states that "Sir Danvers Osborne, after he had been appointed Governor of New York in 1753, brought out, among other presents for the Six Nation Indians, 30 silver medals, his majesty's picture on one side, and the royal arms on the other. . . These medals seem to have disappeared, possibly a stray one may be found in some collection."

Sir Danvers Osborne died two days after his installation in office, and there is no reference to these medals in the succeeding Indian councils. The Baldwinsville medal is one of those described. A remarkably fine bronze medal found in the Onondaga valley in 1893, between the old Indian fort and the present reservation, has no reference to the Indians and yet may have belonged to one of them. It is finely executed, and was found by Mr George Slocum, in whose hands it still remains. Fig. 311 shows the obverse and fig. 312 the reverse.

On the obverse is a fine bust of the duke of Cumberland, with the legend in capitals around the edge, WILL: DUKE: CUMB: BRITISH: HERO. The other inscriptions are in capitals. Under the bust and following the rim is a scroll inclosing the words "BORN 15 APR. 1721." Next the rim, on the reverse, are the words, "REBELION JUSTLY REWARDED;" and under a group, in two straight lines, is the continuation "| AT CARLILE | ANNO 1745. |" A bareheaded officer leads forth two prisoners on the left; one of them a Scotchman with a rope around his neck; the mounted duke points with his sword to the right, as though ordering them to execution. This is not mentioned among the war medals of the British Museum.

A very interesting series of medals was designed expressly for Indian use, but the exact date is in question. An unused example is figured in the *Medaillier du Canada*, or Canadian Coin Cabinet, published at Montreal in 1888 by Joseph Leroux M. D. The brief description follows: "837. Obv.: View of the City of Montreal. MONTREAL. D. C. F. Rev.: Plain, in order to write the name of the Indian chief to whom the medal was awarded. Size 32, rarity 8."

This retains the ring in the loop above, but this is commonly lacking. On the obverse the city is represented with houses, church spires and the British flag, and has lines of defense between it and the water. A small cartouche below incloses the letters D. C. F. The reverse is perfectly smooth in this case. In others the Indian's name is in script above, following the rim. The name of the nation is in capitals, in a straight line across the center.

As Mr McLachlan has given special attention to these medals, some quotations are here made from his letters to the writer in 1891. He differs from the latter regarding the date, connecting them with Sir William Johnson's western trip in 1761. He says:

He is at Oswego, ready to sail on July 21, 1761: "Got everything on board the vessel, then met the Onondaga chiefs. When assembled, I bid them welcome. . . Then delivered the medals sent me by the General for those who went with us to Canada last year, being twenty-three in number." The taking of Montreal was almost the only engagement in which the New England Algonquin tribes acted with the Iroquois. Montreal was invested, at the conquest, by an army in which the Indians under Sir William Johnson took a prominent part, and there is no reason why the view of Montreal should have been used for any other occasion than the conquest.

In regard to other points, he adds that in his opinion an actual instead of conventional view of Montreal would have been given when better known:

The D. C. F. is a stamp such as jewelers use to stamp their plate. It has been stamped on after the medal was cast. That the name of the tribe should be spelled differently from Sir William Johnson does not matter, for the item states that they were ordered by the General, probably Amherst. He therefore would adopt his own spelling. Medals given after the Revolution bear the head of George 3 and the royal arms.

In a letter of June 4, 1902, Mr McLachlan maintains his position and adds:

I have claimed that the medal was made in New York. This is borne out by the medal described by Betts, page 227, which bears the same maker's mark. The medal is too crude in workmanship to be of English manufacture. The New York Indian medal clearly

proves that the maker was not a Canadian. Hence the medal could not have been revolutionary. As is well known in history, the bulk of the Indians that came to Montreal were from Michigan and other western districts, while those who were at the capitulation of Montreal were Mohicans and Iroquois. We find none of the Montreal medals among the tribes that were under the French influence previous to the conquest. All I have seen or heard about bear the tribal names, Mohicans, Mohawks and Onondagas. This to me is a most convincing argument. These three tribes would not have been singled out to the exclusion of the great numbers of the western tribes. Another strong proof is that we have no other medal that could have been distributed in 1761 by Sir William Johnson, as described in the entry in his diary. Then the inscription scratched on my medal must be counted of some value as evidence.

All of Mr McLachlan's arguments have been stated, and due weight should be given to them and to the rank of their author, from whom the writer is compelled to differ, though with some hesitation. I do not find it proved that these medals were made in New York and not in Montreal. Some of the best silversmiths were in the latter place at both dates mentioned. If they were made in New York, it must be remembered that that city was in British hands through nearly the whole of the revolutionary war, and was in constant communication with Quebec and Montreal. There are two medals directly relating to the conquest of Canada and the taking of Montreal, which Johnson might have used. The inscription scratched on Mr McLachlan's medal is clearly erroneous in date, as will appear later. The omission of western tribes on the medals found is no more singular than the omission of four of the Six Nations. It is negative evidence at best. Thus, while it would be unwise to say that the true date is not that of 1761, there is but a presumption in favor of that date.

Some reasons against it will appear in the descriptions of these and other medals, but others may be briefly stated here.

Conventional views of cities were then customary, as may be seen on old powderhorns and seals; Montreal was the seat of the Indian agency during the Revolution and the headquarters of warlike operations; the spelling of Onondagos is that of Col. Claus, the agent, and not that of Johnson; the River Indians were constantly employed by

the British government, had villages in the Mohawk territory, and virtually belonged to that people. In the Revolution 60 of them are said to have fought on the English side. It is improbable that Johnson had 23 medals with names and nations inscribed, for distribution at Oswego. They would have had a general character, whereas these were filled out from time to time for personal services. Some, held in reserve, were never engraved. Lastly, some of these names correspond with those of chiefs attached to early land treaties with the State of New York.

In 1761 Johnson also had similar medals for the Oneidas, but none of these have been found. He was at Oneida Old Castle, July 16, and said:

I then acquainted them that General Amherst had sent me, some time ago, medals for such persons as went to Canada with the army last year, which I was now ready to deliver, were the persons here to whom they belonged. As they were not, must keep them till I had an opportunity of delivering them myself, that no mistake might be committed. *Stone.* Johnson, 2:432

Mr J. V. H. Clark described one several times examined by the writer:

A silver medal was found near Eagle village, about the size of a dollar, but a little thinner, with a ring or loop at one edge, to admit a cord by which it might be suspended. On one side appears in relief, a somewhat rude representation of a fortified town, with several tall steeples rising above its buildings, and a citadel from which the British flag is flying; a river broken by an island or two, occupies the foreground, and above, along the upper edge of the medal, is the name Montreal. The initials, D. C. F., probably of the manufacturer, are stamped below. On the other side, which was originally made blank, are engraved the words CANECYA, Onondagoes. . . There is no date on this or any other of the medals. But this must be at least older than the Revolution. *Clark*, 2:274

This should be *Caneiya* in script and Onondagos in capitals. Fig. 281 shows this medal as drawn by the writer at Mr L. W. Ledyard's, Cazenovia N. Y. in 1882. It was in his possession for many years. If of revolutionary date, as the writer thinks probable, the *Caneiya* of the medal might correspond with the Onondaga chief *Kaneyaagh*, of the treaty of 1788.

Mr McLachlan kindly furnished figures of some medals. Fig. 282 shows one of these, and his description follows:

Obverse, Montreal; in the exergue, DCF stamped in a sunk oval. A view of a walled town with a body of water in the foreground, into which a small stream flows. There are five church spires ranged along the middle of the town, and a flag displaying St George's cross to the right. Reverse. Plain; Onondagos is engraved in capitals across the field, and the name Tekahonwaghse in script at the top. Some one has, at a later time, scratched across the lower part with a sharp pointed instrument, in three lines, | Taken from an Indian | cheif in the AMERICAN | WAR, 1761.|

Mr Betts also illustrated and described this medal.

In the addition there is an evident error for there was no war in that year, but, if it were 1781, it would correspond with the *American* war, as the English termed that of the Revolution. Allowing this date, *Tekahonwaghse* might be *Takanaghkwaghsen*, an Onondaga chief who signed the treaty of 1788, or *Tagonaghquaghse*, appointed chief warrior of that nation in 1770, and perhaps the chief of 1788. Mr McLachlan had this medal from the Bushnell collection. He added, "I know of another in the collection of James Ollier of New York. I am under the impression that it is also in silver, and that it bears the name Onondagos." No account could be obtained of this.

Fig. 283 is a similar silver medal, bought by Mr McLachlan in London. On the reverse this has Mohawks in the field, and *Aruntes* above. It is in extra fine condition. This name does not appear among the many on record in the French war, nor is there any resembling it, but "The Answer of Thayendanegea a Sachem, and of Ohrante a warrior of the Mohocks to the Right Hon^ble^ Lord George Germaine", London, May 7, 1776, is preserved in full. *O'Callaghan.* Col. Hist. 8:678

Those familiar with the great variations in spelling Indian names, and the rank of this person, will have little doubt that Ohrante and Aruntes are the same. It is a curious coincidence that this well preserved medal was obtained in London, where Ohrante spent some months. In another place the Mohawk warrior is called Oteroughyanento, Indians often having two names. In the writer's exhaustive list of Iroquois personal names this nowhere else appears, but it is an unexpected gratification to link the three Iroquois names ob-

tained on these medals with well known persons of the revolutionary period.

Concerning these two Mohawks, Guy Johnson wrote in London, Jan. 26, 1776: "The Indian Chief who accompanied me, with his companion, are persons of character and influence in their country; they can more at large speak on any matters that may be required of them." *O'Callaghan.* Col. Hist. 8:657

Fig. 284 is another medal of which Mr McLachlan says:

It is in the government collection at Ottawa, and came from the collection of Mr I. F. Wood of New York. This is in pewter, and has Mohicrans in the field, either misspelled in the copy or the original. Above is *Tantalkel.* Judging from the medal given to *Tantalkel* of the Mohicans, we infer that his services could not have been valued so highly as those of the Onondaga warrior, for his reward is in the baser metal. How one of that tribe came to receive a medal is explained when we learn that 70 River Indians accompanied Johnson to Montreal.

Another Mohican fared better. The *Albany Argus*, Sep. 27, 1875, described a silver medal found by Mr Kelly of Ballston Spa N. Y. The obverse was as usual. On the reverse, as reported, was Mohicans in capitals, and *Son Gose* in script. Mr Joseph E. Wescot purchased it of the finder, and sold it in 1902 to Mr E. Hallenbeck, 749 Liberty st., Schenectady. Through the kindness of the latter, the writer is not only able to give an accurate figure, but to settle the spelling of a word in doubt. It is Mohigrans, the engraver having mistaken in his orders G for C, and R for K. It was easy to do this. The Indian's name is also *Songose.* This medal was found on the Kelly place, near the bank of the Mourning kill and the old Canadian trail. It is somewhat worn, but in good condition. It is remarkable that so many have the name of this nation. Fig. 388.

In the work of C. Wyllys Betts, already mentioned, he speaks of another Mohican silver medal, on the reverse of which was *Madoghk,* with the nation's name engraved in the usual way. He also takes note of the doubtful spelling, now cleared up by the writer's examination of the Hallenbeck medal. The error was made in all.

The Mohicans became so closely linked with the Mohawks as to share their fortunes and that of the Johnson family. Some of

them are mentioned in the raids in the Mohawk valley. The medals can hardly be referred to Burgoyne's luckless campaign, for each was engraved for a particular person, nor were the Onondagas yet in the field. None known bear the Oneida name, a significant fact, for they were on the American side. Nor were they among Butler's presents in the winter of 1777-78, who gave "in particular 300 of Burgoyne's silver medals to their young warriors." *Halsey*, p. 204. They are not all of silver.

In a description of American medals of the Revolution by J. T. Fisher of Philadelphia, *Collections of the Massachusetts Historical Society*, vol. 6 of 3d series, is one of these medals, but without place or name of Indian, and with another misspelling: "Medal—probably for distribution among the Indians. *Obverse*, A view of Montreal, and above it the name MONTREAL. *Reverse*, The name MOHIGHANS."

In *Le Medaillier du Canada* is a figure of the French Oswego medal of 1758. A better one is given by Mr Betts. As medals were very freely distributed about that time, some of these may have been placed in Indian hands, though of this there is no proof. It is nearly 1¼ inches wide. All the letters are capitals. "Avers: Bust to the right. LUDOVICUS XV. ORBIS IMPERATOR. 1758. Rev.: Four towers. Wesel, Oswego, Port Mahon, Expug, Sti Davidis arce et solo aequata." *Leroux*, p. 177

Leroux assigns a number to Indian use, but some are later than the colonial period. One has George 3 and Queen Charlotte face to face. Another may be like the fine one recently obtained from the Ottawas by Walter C. Wyman. This has a bust of George 3 to the right, and the arms of Great Britain on the reverse. There are several of this character to be mentioned later.

Mr McLachlan discredits Stone's statement that the medals of 1761, "by order of Amherst, were stamped upon one side with the baronet's coat of arms," nor does there seem any direct proof of this. He adds:

I have in my collection 10 or 12 medals relating to the Indians. One of these represents a lion watching a wolf, with a church and schoolhouse surrounded by trees in the background. This, to my

mind, relates to the conspiracy of Pontiac. French medals are now very rare; only one or two are known. After the conquest the Indians had to give them up, or exchange them for medals bearing the bust of George 3. I think it was not customary to strike medals specially for the occasion, but to give the Indians copies of some popular medal of the time; later medals bearing the arms of Great Britain, with only the name and title of the king on the obverse, for inscription. Such are all the medals of George 3, with the single exception of the lion and the wolf.

The one last mentioned has a fine bust of this monarch as a young man in armor. The inscription is simply GEORGIUS III. DEI GRATIA. There is nothing suggestive of Indian life on the medal, and Mr McLachlan merely gives it as his opinion that it referred to the Pontiac war. He states, however, that this was struck as a peace medal for a conference with the Indians at Niagara in 1764, followed by the treaty of 1765. He adds:

> One of these medals, found in the grave of *Otussa* (Pontiac's son) is now in the cabinet of the United States mint at Philadelphia. A considerable number of these medals must have been struck, as two reverse dies were used. The two varieties were found in 1889 buried in one grave in Michigan. *McLachlan*, 2:14

The reverse of this large silver medal has no legend. A lion lies on the turf in the foreground, a wolf drinks at a stream, a church and house are in the background. Without an Indian symbol its Indian use seems clear. Three others of this monarch's reign are ascribed to 1762 and 1764, and two of these refer to New York. Medalists suppose them to have been struck for Canadian chiefs at the close of the French war. They are quite as likely to have been given to New York Indians, and there is no reference to Canada, as on some of earlier date.

The one ascribed to 1762 has the youthful bust of George 3 in armor, and the British arms on the reverse. One of 1764 has his bust in armor to the right, with the inscription, GEORGIUS III. D. G. M. BRI. FRA. ET. HIB. REX. F. D. On the reverse, "Happy while united," in capitals. In exergue, 1764. Indian holding a pipe, seated near an officer on a roll of tobacco. Background, city and harbor of New York. *Betts*, p. 226

Another has the same obverse, and the same date and legend on the reverse. An officer is in the foreground of the landscape, and an Indian is seated in a rustic chair on a river bank, on the right. On a rocky bank is a house, and there are three ships beyond. *Betts*, p. 227

Some medals of George 2 are of special interest. War had not prospered. Pennsylvania had suffered severely, but in 1757 a preliminary treaty was made with the Delawares and Shawnees. The Six Nations were balancing between the English and French, and great efforts were put forth for their support. So a medal was prepared in 1757, appropriate to the times. On the obverse is a laureated bust of George 2 in armor, with the inscription, GEORGIVS. II. DEI. GRATIA. On the reverse is the legend, in capitals, "Let us look to the Most High, who blessed our fathers with peace." In exergue, 1757. The field has a man seated under a tree on the right, offering a calumet to an Indian seated on the other side of a council fire. The sun is above the Indian on the left. This medal occurs in silver, copper and pewter, and is supposed to be the first struck in America. It was made for the Friendly Association for regaining and preserving peace with the Indians. *Betts*, p. 179. This is the one mentioned in the Canadian documents.

Two, relating to the conquest of Canada and the capture of Montreal, seem more likely to have been those given by Johnson to the Indians in 1761 than those which Mr McLachlan assigns to that period, as they were issued in time and relate to that event. One has a laureated head of the monarch, with the inscription, GEORGE II. KING. On the reverse is the legend, CANADA SUBDUED. In exergue, MDCCLX. S. P. A. C. A pine tree rises in the center, under which is a weeping woman seated on the ground. On the left a beaver crawls up the bank. *Betts*, p. 192

Another, issued by the same society, has points of resemblance and is of the same date. On the obverse is a river god reclining, with a bow, quiver and ax below him. A beaver climbs up the bank, and overhead is a shield with Amherst's name. The legend in capitals is, "The conquest of Canada completed." The reverse

has a mourning woman seated under a tree. To the left is an eagle, and to the right an ax, etc. The legend is, "Montreal taken MDCCLX." In exergue, "Soc. promoting arts and commerce." *Leroux*, p. 166. As these have Indian symbols, and one of them Amherst's name and that of Montreal, they seem to suit in every way Johnson's lavish distribution of medals at Oswego, when sent him by his leader.

Red Jacket's medal has been made the subject of controversy. Fig. 411 is taken from an article in *Harper's Magazine*, 1866, in which its history is given. A note says:

It is said that there are in existence other medals, each purporting to be the genuine Red Jacket medal. Possibly copies of it may have been made when it was at one time or another in pawn in the hands of those to whom Red Jacket had pledged it for whisky. But none of these copies were ever owned by Red Jacket himself. The original medal, from which our drawing was made, is, as we write, open to public inspection at the jewelry establishment of Messrs Browne and Spaulding, in Broadway, New York, by whom, with the assent of the owner, it was placed at our disposal for illustration. We have in our possession the most abundant proof that it is the genuine, and only genuine, medal presented by Washington to Red Jacket. *Harper's*, 32:324

It then belonged to General Ely S. Parker, a Seneca chief. In 1890 a medal was presented to the Red Jacket Club of Canandaigua, as having belonged to that chief. Mr William C. Bryant, of Buffalo, wrote to Hon. George S. Conover on the subject, in the following words:

Buffalo, Feb. 3, 1891

FRIEND CONOVER: There is no rational ground for doubt that the medal worn by General Parker is the one presented by President Washington to Red Jacket. This medal was a familiar object to all Buffalo residents while the old chief lived; and, after his death in 1830, it was well known that it descended to, or became the property of Jemmie Johnson, Red Jacket's nephew and the successor of Handsome Lake, the great Iroquois prophet. Soon afterward, and shortly before Johnson's death, it became the property or possession of General Parker, its present owner. In 1851 or 1852, when a boy, I visited Jemmie Johnson at his cabin, and he exhibited the medal to me.

It should be remembered that the Red Jacket medal is not a unique article, but one of many which were stricken off by the

government when Red Jacket was alive, for presentation to distinguished chiefs of the Iroquois Confederacy. There are, perhaps, two or three specimens similar in appearance to the Red Jacket medal still extant. Probably the one presented to the Red Jacket Club of Canandaigua is one of this class of medals, contemporaneous with that of Red Jacket. That it was ever worn by the old chief is not probable. Sa-go-ye-wa-tha had only one medal, and of this he was very fond and proud. During his career he owned several tomahawks and gave away at least two of them, whose subsequent history can still be traced; but he seemed to cling to this medal as if it were a most precious heirloom or sacred amulet.

I was present at the Six Nations mourning council, when General Parker was invested with the title of Door Keeper *(Don-e-ho-ga-wa)*, one of the 50 grand sachemships of the Confederacy. This was, I think, in 1850. He then wore the Red Jacket medal, and in open council it was exhibited to many of Red Jacket's compeers, none of whom doubted its authenticity.

To this Mr Conover added:

A few years since the Cayuga Indians residing in Canada employed an attorney in Buffalo to urge a claim against the State for a portion of the annuity paid by the State to the Cayugas in the United States, they having been deprived of the same since the War of 1812. Among other matters put in the hands of this attorney was a silver medal, a facsimile of which is to be found in the printed law case. This medal is of the same size, and substantially the same as the Parker medal, having the same inscription on one side, viz, "George Washington, President, 1792." This medal is claimed to have been presented to *O-ja-geht-ti*, or Fish Carrier, at that time the head chief of the Cayuga Indians, and has been in the possession of every successor in office, who has been uniformly styled by the same name from that day to the time of the present Fish Carrier. The medal presented to the Red Jacket Club at Canandaigua, I understand, is about one third smaller in size than either of the two above named.

Mr L. H. Morgan says of these:

The government has long been in the habit of presenting silver medals to the chiefs of the various Indian tribes at the formation of treaties, and on the occasion of their visits to the seat of government. These medals are held in the highest estimation. Red Jacket, Corn Planter, Farmer's Brother and several other distinguished Seneca chiefs have received medals of this description. Washington presented a medal to Red Jacket in 1792. It is an elliptic plate of silver, surrounded by a rim, as represented in the

figure, and is about 6 inches in its greatest diameter. On each side it is engraved with various devices. The medal is now worn by *Sose-há-wa*, (Johnson) a Seneca chief. Medals of seashell, inlaid with silver, were also used. *Morgan*, p. 388

At the reinterment of Red Jacket in 1884, Gen. Parker exhibited this medal. " It is of silver, oval in shape, 7 inches long by 5 inches broad. The general had dressed it in black and white wampum; the black indicating mourning and the white peace and gladness." The above long diameter includes the loop.

A copy of this medal is now in the National Museum, Washington, and data obtained thence made a difference in date and size:

The original of Red Jacket's medal is engraved. It is oval, 5¾ by 4 inches. It was presented by President George Washington, in 1795, to the Indian Red Jacket, who, with a number of chiefs of the Six Nations, visited Philadelphia, then the seat of government, at the invitation of the first president. Obverse: figure of Red Jacket presenting to General Washington the pipe of peace. In the background a man plowing and a pioneer cabin; beneath, the inscription " George Washington, President, 1795." Left field, a pine tree. Reverse: the American eagle, with clouds and rays above and 13 stars below; in beak a scroll, with " E Pluribus Unum."

Mr J. V. H. Clark described a brass medal found near Indian hill, Pompey, in 1821:

It was without date, on one side of it was a figure of Louis 14, king of France and Navarre. On the reverse side was represented a field, with three flowers-de-luce, supporting a royal crown, surrounded by the name of Nalf Lanfar & Co. It was about the size of a Spanish pistareen, had been compressed between dies, characters and letters distinct. *Clark*, 2:255

On a neighboring site a brass medal was found, on which was a horseman with drawn sword. On the other was " William, Prince of Orange ", with a crest or coat of arms; the date was obliterated. William, Prince of Orange flourished in 1689, and was conspicuous in the affairs of New York for several years previous. This medal may have been a present by him to some distinguished chief. *Clark*, 2:258

That medals and coins should be sometimes found near the old colonial forts is to be expected, but they have seldom been reported, and have no necessary connection with Indian life. A fine gold

piece found near Fort Brewerton, and bearing the arms of the duke of Brunswick, has been shown the writer. From the same place came a copper medal, 1½ inches in diameter, having an erect woman, with shield and cornucopia on the obverse, and the legend, "Honor obtain'd through virtue," on the reverse. It is some years since the writer has seen this, but he has the impression that it was once a familiar form, as far as the obverse is concerned.

Religious medals

A much larger class of medals was of a religious character, usually of small size and varied forms. Mr Clark described a large one:

In July 1840 was found, on the farm of Mr William Campbell, by his son, on lot number three, La Fayette, a silver medal, about the size of a dollar, and nearly as thick. On one side is a device, surmounted by an angel on the wing, stretching forward with its left hand, looking down upon those below with a resolute, determined and commanding countenance. Far in the background is a lofty ridge of mountains. Just beneath and away in the distance, is seen an Indian village or town, towards which the angel is steadily and earnestly pointing. Above this overhangs a slight curtain of cloud or smoke. Between the village and the mountain are scattering trees, as if an opening had just been made in the forest; nearer are seen various wild animals sporting gayly. In bolder relief are seen Europeans, in the costume of priests and pilgrims, with staves, exhibiting by their gestures and countenances, hilarity, gladness and joy, winding their way up the general ascent towards the mountain, decreasing in size from the place of departure, till lost from view. Among them are wheel carriages and domestic animals, intermixed. On the right is a fair representation of a cottage, and a spacious commercial warehouse, against which are leaning sheaves of grain. The whole is surrounded by the following inscription in Dutch: GEHE AUS DEINEM VATTER LAND, 1 b. M., XII., V. 1, and at the bottom across, LASST HIER DIEGVTER. On the opposite side there is a figure of the sun shining in meridian splendor, casting its noontide rays over a civilized town, represented by churches, stores, dwellings, etc., with various domestic animals, and numerous persons engaged in husbandry and other pursuits. In bolder relief stand Europeans in the costume of the 15th and 16th centuries, engaged as if in animated and joyful conversation and greetings, and by various attitudes manifesting happiness and joy. On the right is represented a section of a church, at the door of which stands a venerable man, with head uncovered, with his hands

extended, as if welcoming these persons to a new and happy habitation. This side is surrounded by the following inscription: VND DV SOLLT EIN SEEGEN SEYN, 1 b. Mos., XII., V. 2, and across the bottom as follows: GOTT GIBT SIEWIEDER. *Clark*, 2:274

This is a great amount of detail for one medal. The quotations are from the German Bible, and relate to Abraham's migration. Clark questioned whether the medal might not be a relic of the Zeisberger mission of 1750, but the site where it was found had then been long abandoned, and it suggests the encouragement of emigration from the fatherland. It may be referred to the end of the 17th century.

Mr Clark gives figures and descriptions of several small medals, but those which follow are mostly those examined by the writer, and are but a sample of those abundant during the Jesuit missionary period.

Fig. 296 shows one which differs from the rest in having a German inscription, and its age may be uncertain. It was found on an Indian camping site near Baldwinsville in 1880, and is of brass, elliptic and thin. On one side is a border of 15 stars, inclosing a cross placed above the letter M. Below is a flaming heart, with another pierced by a sword. On the obverse is the Virgin Mary, with a halo around the head and drooping palm branches in each hand. She seems to be treading on a serpent, but this is corroded and may be a date. The German inscription follows the border in a double line. It is now indistinct and the writer made it out as follows: GEHE PA GEN . . . NDE EMPFANGEN. RITT. FUR. UNS. The inner line is D: W: ZU: D: UNSRE: ZU: FURCHT. NEHMEN. As some letters are doubtful Mr Stewart Culin suggested that the opening words might be *Gehe fagen*, and the last but one *Flucht*. The medal has disappeared, and the inscription remains in doubt. It may be recent, as the writer has examined a smaller silver one of 1830, found at Mobile in 1868, closely resembling this. It has but 12 stars, and the double inscription is in English:

"O Mary, conceived without sin,
Pray for us who have recourse to you."

This differs greatly from the German inscription above, and has been rather common in the century just past, but there are early examples which are similar. Mr Clark described a small brass medal found in Pompey, and in good preservation. It had:

> The figure of a Roman pontiff, in a standing position, in his hand a crozier, surrounded with this inscription: *B. virg. sin. P. origi con.*, which we have ventured to write out *Beata virgo sine Peccato originali concepta*, or as we might say in English, The blessed Virgin conceived without original sin. On the other side was a representation of a serpent, and two nearly naked figures looking intently upon it. This one is very perfect in all its parts, and the letters as plain as if struck but yesterday. *Clark*, 2:273

He described two others from a later site. One was "an octagonal brass medal nearly an inch in diameter, having a figure with the name *St Agatha*, and the Latin word *Ora*, a part of the Gregorian chant. Also a silver medal half an inch long, with a figure inscribed *St Lucia*, and the same fragment of a chant." *Clark*, 2:280

Fig. 298 shows the first of these, and fig. 300 the second. His figure has *Ora. P. N.* in the latter instance, and these letters seem to have been obliterated in the other. This gives the familiar *Ora pro nobis.*

Many of this class of medals have been found in Cayuga county, but most of these have been dispersed. Mr Betts described one from Scipioville, on the obverse of which is a female saint, facing the right. The inscription is Santa. Rosa. de. Lima. Ord. He said that this saint is still very popular in Canada. On the reverse is a head of St Paul, facing the left, with arms crossed and holding a crucifix. *Betts*, p. 32

Though these medals are usually of brass, some are of lead and silver. Fig. 291 is of lead, and was found at Indian castle in Pompey. It is elliptic in outline, showing a bust with uplifted hand, and is perforated at the base. Fig. 294 is of silver and from the same place. It is circular and suggests a coin, but the writer recalls none like it. A lion holding arrows is on one side, and on the other three lines of letters and a date partially effaced. The date, as well as the site, is of the 17th century. There is a single perforation.

Fig. 292 is a heart-shaped medal, with an embossed heart in the center, and a dotted border. It was found at Scipioville. Fig. 293 is from the same place, and is larger than most examples. It is elliptic in outline, with a fine half length figure and a partially effaced inscription relating to Francis Xavier. Fig. 301 came from the same site and is octagonal. A fine bust, with raised hand, has an inscription around it, of which "Francis, Ora P." can yet be read. Fig. 302 is a fine example from the same place and of the same form. A cross, with a halo of rays, is above what may be either altar or font, on either side of which are kneeling figures. Fig. 295 is another octagonal medal from Cayuga county, with the bust of a man and a child. Fig. 299 shows both sides of an elliptic medal from a small site near the entrance of Onondaga creek into the lake, and which was much frequented about the year 1700. On both sides are figures apparently in ecclesiastical garments, with hoods thrown back. The inscriptions are partly effaced, but the following may be traced on one side: S. IO. . . . ANNES . . . CAPISTR. On the other appears S. P. A. S. (a chalice here in the border) CHALIS. S. . . . ON. There is a prominent loop above.

An elliptic silver medal, recently found in Pompey, is too much defaced for definite description.

Two brass medals are in Mr Stanford's collection at Munnsville. Fig. 385 is the largest of these, and has on one side a head of Christ with a halo. The inscription is IESVS FILIVS DEI. On the reverse is a head of the Virgin Mary, also with a halo, and the words MATER DEI. Fig. 384 is a smaller medal, with the Virgin and child on the obverse. On the reverse is the sun above, and below this a figure which may be altar, candlestick or font, being somewhat worn. On either side is a kneeling angel.

A fine brass medal was found by the Rev. W. H. Casey at Union Springs, in the autumn of 1902. It is in excellent preservation and is 1½ inches long, including the loop, and nearly 1⅛ wide. On one side is a fine head of Christ and SALVATOR MUNDI; on the other a head of the Virgin Mary and MATER CHRISTI. It was seen too late to illustrate here.

Brooches

About the beginning of the 18th century, Iroquois taste in ornament took a decided turn. Glass and porcelain beads were still in favor, but the brass and bronze ornaments began to give place to silver. The change came gradually, but very decidedly, and in the end affected all Indian tribes. Loskiel said: "The rich adorn their heads with a number of silver trinkets of considerable weight. This mode of finery is not so common among the Delawares as the Iroquois, who, by studying dress and ornament more than any other Indian nation, are allowed to dictate the fashion to the rest."

By the middle of that century the Indians had everywhere become critical in this matter. La Presentation (at Ogdensburg) was settled in 1749, and reference is made to silver articles in the account of the settlement in *Lettres edifiantes et curieuses.* The matter of rival trade, as between New York and Canada, was as burning a question then as now, and the latter had the same disadvantage of position in winter, enhancing the price of goods. Toronto and Niagara could have stopped, it is said, "all the savages, had the stores been furnished with goods to their liking. There was a wish to imitate the English in the trifles they sold the savages, such as silver bracelets, etc. The Indians compared & weighed them, as the storekeeper at Niagara stated, and the Choëguen (Oswego) bracelets which were found as heavy, of a purer silver and more elegant, did not cost them two beavers, whilst those at the King's posts wanted to sell them for ten beavers. Thus we were discredited, and this silver ware remained a pure loss in the King's stores. . . . To destroy the Trade the King's posts ought to have been supplied with the same goods as Choëguen and at the same price." *O'Callaghan,* p. 437

William Smith published his *History of New York* in 1756. He said of the Indians, "Many of them are fond of ornaments, and their taste is singular. I have seen rings affixed, not only to their ears, but to their noses. Bracelets of silver and brass round their wrists, are very common." *Smith,* p. 69

Heckewelder described the funeral of a woman in 1762: "Her garments, all new, were set off with rows of silver brooches, one row

joining another. Over the sleeves of her new ruffled shirt were broad silver arm spangles," etc. A good deal of wampum and many silver ornaments were placed elsewhere. A note says of the brooches, " a kind of round buckle with a tongue, which the Indians fasten to their shirts. The traders call them brooches. They are placed in rows at the distance of about the breadth of a finger one from the other." *Heckewelder*, p. 270

In Col. Proctor's journal of May 3, 1791, he relates his visit to the Onondaga village 3 miles east of Buffalo. They had 28 cabins, and were " well clothed, particularly the women, some of whom were dressed so richly, with silken stroud, etc., and ornamented with so many silver trappings, that one suit must be of the value of at least thirty pounds." *Penn. Archives*, 4:591

Miss Powell was at Buffalo in 1785, and gave an account of Capt. David, a clean, handsome and graceful Indian:

His hair was shaved off, except a little on the top of his head, to which his ornaments were fastened; and his head and ears were painted a glowing red. Round his head was fastened a fillet of highly polished silver. From the left temple hung two straps of black velvet, covered with silver beads and brooches. On the top of his head was placed a foxtail feather, which bowed to the wind, as did two black ones, one in each ear. A pair of immense earrings, which hung below his shoulders, completed his headdress, which I assure was not unbecoming, though I must confess, somewhat fantastical. His dress was a shirt of colored calico,—the neck and shoulders covered so thick with silver brooches as to have the appearance of a net; and his sleeves were much like those the ladies wore when I left England, fastened about the arm with a broad bracelet of highly polished silver, engraved with the arms of England; four smaller bracelets round the wrist, of the same material; and around his waist a large scarf of very dark colored stuff, lined with scarlet, which hung to his feet; part of this scarf he generally drew over his left arm, which had a very graceful effect when he moved. And his legs were covered with blue cloth, made to fit neatly with an ornamental garter bound below the knee. *Ketchum*, 2:96

These accounts fully show the abundance of silver ornaments in that century. Elkanah Watson noticed the same thing at the treaty of Fort Stanwix in 1788. Many of the Indian women were dressed

"in the richest silks, fine scarlet clothes, bordered with gold fringe, a profusion of brooches, rings in their noses, their ears slit, and their heads decorated with feathers." These things bear out the statement made by an Onondaga to the writer, that 50 years ago some families had each a bushel of such ornaments.

In speaking of personal adornment, Loskiel said that Indian women were well dressed:

> The Delaware men pay particular attention to the dress of their women, and on that account clothe themselves rather meanly. There are many who would think it scandalous to appear better clothed than their wives. *Loskiel,* 1:51

The women wore petticoats, reaching a little below the knee. Some wore garments "of printed linen or cotton of various colors, decorated at the breast with a great number of silver buckles, which are also worn by some as ornaments upon their petticoats. . . They adorn their ears, necks and breasts with corals, small crosses, little round escutcheons, and crescents, made either of silver or wampom." *Loskiel,* 1:52

Heckewelder speaks much to the same purpose:

> The wealthy adorn themselves besides with ribands and gartering of various colors, beads and silver brooches. These ornaments are arranged by the women, who, as well as the men, know how to set themselves off in style. . . The women, at the expense of their husbands or lovers, line their petticoat and blue or scarlet cloth blanket or covering with choice ribands of various colors, on which they fix a number of silver brooches, or small round buckles. *Heckewelder,* p. 203

Quotations regarding the lavish use of silver ornaments, specially in the latter part of the 18th century, might be multiplied. It may be well to add what Mr Morgan has said of this feature of Seneca dress. The short overskirt of calico, called by them *Ah-de-á-da-we-sa,* and reaching above the knee, usually had one or two rows of brooches on each side, as the writer often has seen them. Morgan adds:

> The Indian female delights in a profusion of silver ornaments, consisting of silver brooches of various patterns and sizes, from

those which are 6 inches in diameter, and worth as many dollars, down to that of the smallest size, valued at a sixpence. Silver ear-rings and finger rings of various designs, silver bracelets, hatbands and crosses, are also found in their paraphernalia. These crosses, relics of Jesuit influence, are frequently 8 inches in length, of solid silver, and very valuable, but they are looked upon by them simply in the light of ornament. *Morgan,* p. 386

The last remark should be always borne in mind. The writer has bought many of these ornaments of many Indians, but they were without significance to them. If a meaning is suggested, they will good-naturedly assent to anything; they do not think of one themselves, as Mr Morgan found.

Apparently the brooch was an evolution from the gorget, for some metallic ornaments of this kind were tied on, not buckled. Such ornaments are rare, and may never have been common. As far as known, they are circular, and like the brooch of that form except in the center. Fig. 17 is a silver one of this kind, having four interlacing rings inside of the outer circle. There is no place for or sign of a buckle, and it was probably tied or sewed to the garment, for there is no reason to think it was suspended. This was found in the town of DeWitt N. Y. and is in the Richmond collection. Fig. 21 is a smaller one of the same design from the Mohawk valley, which belongs to Mr Frey. A large and handsome one from Ohio was shown at the Pan-American Exposition. In this a slender outer ring inclosed an open six pointed star, bisected by an inner circle. Fig. 160 is of copper and has no central opening. It is from the site of 1677 in Pompey, and is unfortunately broken.

Like wampum, the silver brooches partially answered the purpose of money. The Onondagas often placed them in pawn, but sometimes parted with them at a fixed value. Some visitors at Oquaga, in 1769, observed this there. "Some of the women wear silver brooches, each of which passes for a shilling, and are as current among the Indians as money. Brant's wife had several tier of them in her dress, to the amount perhaps of 10 or 15 pounds." *Halsey,* p. 143. That is, she wore from 200 to 300 of these; and this seems no rare example.

The brooch proper has a central opening, across which a tongue extends, like that of a buckle. The cloth is pinched up and passed through this opening, the tongue penetrating it twice, when it is drawn back, and the brooch is firmly in place. When they were plentiful, the smaller ones were usually arranged in two lines down the center of the overskirt in front, and across the front of the lower edge. The larger ones were reserved for the upper part of the dress. Sometimes small ones were arranged on ribbons. Most of the smaller forms were very abundant. In those of similar outline quite a variety was obtained by varying the perforations and the surface ornamentation. The latter was mostly made with punches, but the graver was occasionally used. Those formed of brass are extremely rare, the writer having obtained but two among the hundreds of silver ones which he has seen. There are early examples in graves. Of these the writer has seen several from graves in Wisconsin. They were mostly circular, but one stellar brooch had broad and short rays.

Preliminary to further descriptions it may be said that Mrs Harriet Maxwell Converse furnished an illustrated paper on "The Iroquois Silver Brooches" for the State Museum report for 1900. Many of the illustrations will be recognized here, nearly half coming from the writer's collection and the remainder, also found in the paper mentioned, from that of Mrs Converse, there being a mutual interchange of figures.

Fig. 31 is a fine brass brooch which the writer obtained at Onondaga. It is a circular ornament of good size, with crenulated and embossed edge. To show the rarity of this material employed in such a use, it may be said that an Indian friend was surprised at it, never having seen one of the kind before. The writer afterward secured another circular brooch of brass which was plain and much smaller.

The simplest and perhaps earliest form of the brooch seems to have been that called the round buckle, allusions to which have been quoted from several authors. It is frequent yet, either plain or ornamented. With the three double-barred silver crosses, described by Mr Boyle in Canada, was a piece of cloth decorated with 20 of these. Dr Evarts, of Silver Creek N. Y., showed the writer

35 plain rings buckled on a piece of cloth, which he had from the neighboring Cattaraugus (Seneca) Indians. The writer has many of various styles of finish, and might easily have had more. In the 18th century they were cheap as compared with others, and were lavishly employed. A few are shown.

Fig. 35 is one out of a number the writer obtained at Onondaga. Fig. 38 is out of another lot he had from the same place. These are rounded on the face and flat on the back. It is quite a common size. Fig. 23 is a larger size from the same place, and made in the same way. Fig. 25 differs from these in being broader and flat. The writer had this also from Onondaga, but it is not so common as the last. Many of these simple forms have some surface ornamentation. Fig. 19 was found in the Mohawk valley, and is small, elliptic, and has many transverse grooves. Fig. 24 has the same style of ornament, but is larger and circular. It is also a Mohawk example.

Fig. 85 preserves the circular form, but has broad undulations on the surface. This and the next three the writer had from Onondaga. Fig. 88 differs from the last in having the indentations only on the outer edge of the surface, and in their being separate instead of continuous. Fig. 90 is a flat ring, with distinct indentations on each edge of the surface. It is a fine and rather rare form. Fig. 91 is worked so as to show a continuous series of semicircles all around the center of the surface. This is not a frequent style now. Fig. 74 has nine bosses on the surface, with intervening cross lines. The writer got this at Onondaga, and has seen none like it.

Fig. 46 was given to the Buffalo Historical Society by Mrs Van Rensselaer, with other fine brooches. It has the ring form, but of an angular style. At each angle is a boss, the intervening space being narrower and with three cross grooves. Fig. 73 has a similar character, but the curved spaces between the bosses have no grooves. This came from the Tuscarora reservation.

Fig. 20 is the smallest of the circular brooches, which the writer has seen, that can not be classed with the ring brooches or round buckles. Small as it is, eight small circles adorn the surface. It is almost flat, and came from a grave in Cayuga county.

No brooches are more effective than those having the form of a star, and the writer has been fortunate in securing many figures and examples of these. They are usually flat, but fig. 1 has a slightly convex surface. This is of a large size, and has a heart-shaped opening in the center, and 20 short embossed rays. They never have sharp points, as these would be inconvenient. This came from the Cattaraugus reservation. It is more highly ornamented than most of these. Fig. 2 shows a fine star brooch, with eight rays and an ornamented surface. This the writer had from Onondaga.

Fig. 3 is another Cattaraugus star brooch, with 16 short embossed rays. It is otherwise perfectly plain. Fig. 5 is another from Cattaraugus, with eight rays. The writer obtained three of these, and they are the smallest of the kind he has seen. They were probably used on ribbons. For its size this is well ornamented.

Fig. 4 is a fine, large star from Onondaga, with 12 embossed rays. In the figure dark spaces show all the perforations except the central one. Fig. 6 is a small star brooch from the Tuscarora reservation, with seven rays. The surface decoration is simple.

The following five the writer obtained at Onondaga. Fig. 7 is a star of 13 rays with a well ornamented surface. Fig. 8 has 12 rays, and is much smaller and simpler. Fig. 9 is one of the prettiest he has found. The edges of each of the nine embossed rays are slightly concave, and the surface ornaments are made to correspond. Fig. 10 is the largest he has obtained or seen. It is quite thick, has 12 embossed rays, and the surface is neatly adorned. The full width is over 3¼ inches. This fine ornament belonged to Chief Abram La Fort, or *Te-hat-kah-tous,* who died in 1848. Fig. 15 has 12 embossed rays and neat surface decorations. Fig. 49 is also from Onondaga, and has 12 short rays. This belonged to Miss Remington, once employed in mission work there.

Fig. 11 is a small star in the writer's collection, sent him by Dr C. B. Tweedale, and which was found in a grave in Huron county, Ont., Canada. It has a plain surface and eight embossed rays. The writer has many drawings of Canadian brooches, some

very fine, but they do not differ essentially from those of New York, where many of them were probably made.

Fig. 12 is a small and plain star of 12 rays, which the writer had from the Allegany reservation. Fig. 16 is a fine star from the same reservation. It has 14 quite short embossed rays. Fig. 13 is a fine star with eight broad rays and bosses, belonging to the Buffalo Historical Society. Fig. 14 is in the Richmond collection and is quite peculiar. The central perforation is quite large, and the 12 long rays terminate in circular points, which are not embossed. The surface decoration is simple. This is one of a number of Seneca brooches in this collection.

Mrs Harriet Maxwell Converse secured a large and interesting collection of brooches, part of which now belongs to the State. The writer is indebted to her for figures of many of these, a number of which will be used in this paper. Fig. 22 is a large circular brooch, with a plain rim and an included star with embossed points. Both the dark and light spaces in the figure show perforations. The star has 12 rays. This fine brooch is of a rare type. The three following are also Mrs Converse's. Fig. 32 is large and circular. The 16 projecting bosses have incurved edges between them, and the slightly convex surface is finely ornamented with perforations and tracery. The circular brooches have raised centers as a rule. Fig. 48 is a very pretty and peculiar brooch. Included in the edge are 16 very small bosses, with convex edges between them. The perforations are of an unusual form, and the tracery of a rare character. Fig. 61 has a broadly undulated edge, and the border decoration is not of a common type. Mrs Converse died Nov. 18, 1903.

Fig. 18 the writer obtained at Onondaga. It has 24 projecting bosses on the plain circular edge. There are circular, semicircular and elliptic perforations and some tracery. About two dozen follow which the writer had from the same place. All which succeed are circular till otherwise distinguished.

Fig. 27 has a crenulated edge and three rows of nearly semicircular perforations. Fig. 29 has a similar border, and semicircular, elliptic and triangular openings. Fig. 33 has the same edge, two rows of semicircular and one of elliptic perforations. Fig. 34 is

large and fine, with a broadly crenulated border. Besides the large central one, the perforations are semicircles, rectangles, hearts and triangles. Fig. 34*a* is of good size, with a crenulated border, and three rows of semicircular openings. Fig. 39 is a handsome brooch, with 16 small bosses at the intersection of the crenulations in the border. There are three lines of semicircular openings, and another of quadrilateral forms. Fig. 41 has small bosses closely set around the rim, and is of small size. All the perforations are angular, and nearly or quite quadrilateral. Fig. 42 is much like the last but in every way smaller. The central aperture corresponds with that, but the four openings outside of this are semicircular.

Fig. 43 has the frequent crenulated edge, a line of semicircular, and another of elliptic openings, but between each of the last is a small boss, amounting to six in all. They are rarely found in this position. Fig. 50 is a very pretty but small brooch, with crenulated border. The perforations are elliptic and point to the center. Fig. 53 is small, and has small bosses closely set around the edge. The perforations are elliptic and triangular, and the tracery of unusual design. Fig. 54 is large, with broad crenulations. The openings are two lines of semicircles and one of long triangles. Fig. 58 has a plain edge, with bosses projecting all around it. The apertures form a single line of semicircles. It is a simple but very handsome ornament.

Fig. 59 is a very simple style, with crenulated edge and one row of semicircular apertures. Fig. 60 has the same edge, with a line of semicircular openings and another of hearts and circles. Fig. 63 is a small but showy brooch. Medium sized bosses intersect the angles of the crenulated edge. The apertures are semicircles, ellipses and triangles. Fig. 64 has a crenulated edge, a line of crescents, and another of ellipses. Fig. 65 differs from the last in tracery, and in having an inner circle of stars. Fig. 67 has a crenulated border, and for apertures semicircles, ellipses and triangles. Fig. 68 has broader crenulations than most, and two lines of semicircular apertures.

Fig. 69 is very simple but effective. The crenulations are of moderate width, but halfway to the central aperture is a line of

eight large circular openings. Fig. 77 is one of the plainest kind. The edge is simple, and a star appears in tracery on the otherwise plain surface. Fig. 79 is a pretty brooch with broadly undulated edge. There are eight pyriform apertures, but the graceful tracery gives a pleasant effect. Fig. 89 is of unusual character. Small bosses appear at intervals around the otherwise plain edge, and there is a circle of apertures of the indented shield form. The surface decorations are small circles and dots.

After the above was in print the writer obtained a fine circular brooch $4\frac{1}{4}$ inches across, but not as heavy as the La Fort star. It has 23 obtuse points, two rows of diamond perforations, a row of shield form apertures, and delicate tracery. It came from the Senecas. Some others have been noted but not figured here.

Besides his own circular brooches from Onondaga, selected above, the writer has figured many in the hands of Indians there, or in those of friends who have since parted with them. Some of these will follow, simply credited to Onondaga. Fig. 26 is a fine example of these. It has large bosses on the edge, with double crenulations between them; inside of the border is a line of cordate and triangular apertures, with openings between these and the heart-shaped opening in the center. Fig. 28 is another large brooch with crenulated edges and many perforations. A double row of these, of triangular form, gives the effect of a central star. Fig. 30 is about half the diameter of the last, and has the common crenulated edge. The apertures are lines of crescents, circles and triangles.

Fig. 36 is quite small, and has a crenulated edge. The only decoration is a line of small circles on the surface. Fig. 40 has broad crenulations. The apertures are semicircular and quadrilateral. Fig. 45 has also broad crenulations. One line of ellipses is parallel with the edge; the others point to the center. This has less tracery than the last. Fig. 57 is a rare form. Every third crenulation slightly projects, giving the border an angular appearance, and there are six circular apertures besides the central one. The tracery is tasteful. Fig. 76 has a crenulated border and a line of elliptic apertures.

Fig. 80 is small, but of an unusual design. The border is crenulated, and within are alternate crescent and cordate apertures, four of each, the latter pointing to the edge.

The following, in the writer's collection, come from the Allegany reservation. They are circular, but others from that place are of other forms. Fig. 52 has the broad crenulations finely serrated, a rare feature. There are lines of semicircular, pyriform and very small circular apertures. Fig. 70 has a crenulated border, and two lines of semicircular openings within.

Some other Allegany circular brooches follow. Fig. 51 is a small brooch with crenulated edges. The apertures are crescent and pyriform. Fig. 66 is a very pretty example. The crenulations are alternately long and short, and the perforations are semicircular and triangular. The central aperture is angular, and the tracery adds much to the beauty of this ornament. Fig. 71 is unique. There are eight short projecting points united by curved edges, and two lines of diamond form apertures. Fig. 75 has a plain rim and eight triangular openings. The effect is that of an included star. Fig. 81 has a broadly undulating edge, and a line of elliptic openings pointing to the center. Fig. 84 has a finely crenulated border and a circle of small bosses within this. All the openings, including the central one, are quadrilateral. This is a rare feature in a circular brooch.

The following are in the Buffalo collection. Fig. 37 has broadly crenulated edges, with an inner line of semicircular openings. Within this is another line of six elliptic apertures, alternating with those which may be called cuneiform. The tracery is of small circles and arrow points. Fig. 44 has a crenulated border and a line of triangular openings. An inner line of crescents and delicate tracery adds much to the effect. Fig. 47 has a crenulated edge, and lines of crescent and elliptic openings. Fig. 58*a* is crenulated, and the apertures are cordate and elliptic. It is a very pretty brooch.

The writer secured a number on the Tonawanda reservation, but there was but little variety among them. Fig. 62 is one of these. It has a plain rim, but the single line of semicircular openings gives a starlike appearance to the center. Fig. 82 has very promi-

nent crenulations, and lines of crescent, elliptic and triangular openings. There are many like this.

Three Seneca circular brooches are shown from the Richmond collection. Fig. 56 has a close line of small bosses along the border, and there are four long quadrilateral openings toward the central one, which is both large and angular. Fig. 72 has a similar line of bosses. The apertures are elliptic and triangular. Fig. 78 has a simple rim, and the only aperture is the central one. On the surface are triangles and other tracery.

Fig. 199 is taken from a figure by L. H. Morgan, showing a circular brooch of what is now a very extreme size. The apertures are a line of ellipses, one of large and one of small triangles.

Fig. 55 was not mentioned among Mrs Converse's circular brooches. The border is broadly crenulated, and 13 cordate apertures point to the center. Surface tracery unites some of the hearts so as to form a six pointed star. Her collection comprises some of the rarest forms now to be obtained, and these will successively follow, except the Masonic forms. The localities are unimportant and will be omitted.

Fig. 92 is grotesque and involved. There are animal heads at two opposite angles, of no very certain species. The artist may have had some native kind in mind, but the surface decoration might suggest the leopard and tiger. A grotesque face protrudes beyond the point of the buckle, which probably amused the red man greatly. Of course heraldic meanings might be attached to every point, adding greatly to its poetic charms, but without awakening any response in the mind of the Indian wearer. Fig. 99 shows an eagle with broadly expanded and conventional tail. One wing is naturally raised, the other conventionally, and considerable ornament is added. This should be dated since the rise of the American republic. Fig. 155 has its counterpart in the Toronto collection; and the writer is inclined to think it an extremely conventionalized variant of the preceding, as may appear by reversing it.

Mrs Converse kindly sent her own interpretation of these brooches, which is much more tasteful and poetic than the prosaic

views of the writer, and will be gladly received by those fond of recondite studies. Of fig. 92 she says:

This is the most curious and ingenious form. I have never seen a duplicate of this brooch. It symbolizes the totems, or family union and the man, including the story of their warrior ancestors, and tells the story of the union of the Wolf and Bear. The upper figurehead represents the Bear. The lower, the Wolf, united by a human face, signifying the head of the family. The figure of the Wolf terminates in the war club. The Bear holds the war club, and the pin or buckle unites the two. The Bear chief had married the Wolf woman. Both descended from sachems or head chiefs. Fig. 99 represents a combination of the great Eagle, guardian of the dews and war, or sky and earth. At the spread of the tail the small winged symbols indicate his duty in the air. The flat half circles tell the sign of his earth or war office. The simplest brooch is not an accident of the graver's tool. Each stroke is a symbol in hieroglyphs, understood by the expert sign-reader. Fig. 155 is rare, inasmuch as the design is not common. It is the symbol of the warrior. One end forms the tomahawk, the other a war club.

Fig. 86 may be called either pyriform or cordate, the central aperture being the latter, while the opening above changes the general design to the pyriform. There are basal projections, and those at the top suggest the general figure of a crown. The surface is plain. Mrs Converse considers some of the figures above the cordate forms as owls' heads, taking these for emblems of silence and secrecy. This one she describes as a "heart. Owl defined by the open mouth only. Eyes closed." Fig. 87 she calls "very rare. Finely engraved." The writer has seen but one resembling this, and that was by no means as elaborate and fine. The general form is that of a heart with a coronet above, but with unusual surface decoration.

Fig. 95 is another unique brooch, with several half circular projections, and a fanlike ornament above, which may be a variation of the more common form of the crown, surmounting the open heart below. This general plan appears in very many brooches, with endless changes. Mrs Converse thought, this "represents the flaring tail of a bird, yet the heart is on guard in the center. Evidently a totem bird." Fig. 100 is also unique. Both heart and

crown are much conventionalized, and the point of the former is turned to one side and projects beyond the center.

Fig. 136 is cordate, with the base curving to one side. The crown above is hardly recognizable as such at first, and is much ornamented. Mrs Converse described this as "a single heart, surmounted by the horns of a chief, typical of the faithful love of whoever presented it to the chief or sachem." It is a rather frequent form. Fig. 146 is a fine example of the simple heart with an elegant form of the crown. Mrs Converse's interpretation is ingenious: "Horned or chief's brooch; the three branches denote three chiefs in family succession." The triple character of the crown appears in nearly all, there being a small central projection with a broader one on each side. In rare instances there are more.

Fig. 148 has the heart and crown, the former turning aside and ending in an eagle's head. The definition of the owner is pretty: "The eagle defending the life or heart of its owner." A great many of the single or double heart brooches end with eagles' heads, and come within the era of the American republic. It would be easy to interpret them as meaning that the crown or royal rule, through the heart's blood of the colonists freely shed, terminated in the republic whose symbol is the eagle.

Some of the writer's Onondaga brooches will follow. Fig. 94 is fine and perhaps unique. It has the crown and heart form, with the point turned to one side. The crown has no points, and includes a cordate perforation in its center, surrounded by other forms. Its large size allowed more surface decoration than is usual in these. Fig. 96 may be called a double heart, surmounted by a crown in which are several cordate apertures. The basal terminations are two eagles' heads. A friend had one from the Oneida Indians precisely like this, and it is by no means a rare form. Several of the same class are in the writer's collection. Fig. 101 is a little smaller than the last, and the apertures in the crown are crescents and quadrants. It is like one owned by Mrs Converse, of which she wrote: "Rare. A crown terminating with double eagle-headed snake. This serpent has a power over the land and sea. The wavy lines signifying water, the long or land line, and two

dots signify day, sun and moon, or the journey, the rest and the start." This does not agree with the interpretation of fig. 148.

Fig. 105 can hardly be considered Indian work, though obtained from an Onondaga. There is the familiar heart, with some worn ornament at the end, but the pelican above shows a white man's taste and thought. As far as known, it is unique. Fig. 147 is a fine cordate brooch, with a crown resembling in a general way that in fig. 146, but of a more elegant design. This has a little surface decoration. Fig. 149 is cordate, with another form of crown, where circles replace the frequent points. Fig. 151 is cordate, and has the rounded crown with basal points. Several of these differ little except in the apertures.

Some belonging to Onondagas follow. Fig. 83 is a large brooch formerly worn by Aunt Susannah. It is of a kite or diamond shape, with ornamental edges and tracery. Fig. 102 has a generally cordate form and a suggestion of the crown above. It is quite a departure from the typical form, but the resemblance will at once be seen, as in other cases. There are projections at the sides and base. Fig. 103 has much the same character, but has tracery and circular apertures. Fig. 104 is intermediate between these two.

Fig. 137 has the heart with a conventional and elaborate crown. The base curves to one side, and an eagle's head may have worn away. Fig. 140 the writer had from Onondaga. In the center of the crown and on either side are sharp projections. Mrs Converse thought these crowns with apertures were intended for owls' heads, to which they bear a curious resemblance.

Some Tuscarora forms of this class follow. Fig. 93 is of a general diamond form, with undulating edges and four bosses in the margin. There are several apertures and some tracery. Fig. 150 is quite broad for its size, and is a double heart surmounted by a low crown. The basal point curves to one side.

The following illustrations of this class are of brooches from the Allegany reservation. Fig. 97 is a very simple cordate example, with the base turned to one side. The metal forms a narrow band all around the broad aperture. Fig. 141 has the frequent combination of heart and crown, the latter having sharp projections on each side,

three circular apertures in the crown, and some surface decoration. Usually the lower aperture has a double curve, to emphasize the cordate form. Fig. 142 has the feature mentioned, but is otherwise much like the last. Fig. 143 differs in having a projection in the upper circles, thus giving each of those apertures a crescent form. Fig. 145 has the heart with the point turned to one side, and the highly conventionalized crown. Like fig. 137, the latter has no central projection. The surface is covered with tracery.

Fig. 138 is in the Richmond collection, and is a rare form of the heart and crown brooch. Both lower sides have strong cross corrugations, and the crown has a finely crenulated border, as well as the frequent three projections. In the crown are four circular apertures.

Two are shown from the Cattaraugus reservation. Fig. 139 has the usual combination of heart and crown, the two upper apertures having the crescent form. Fig. 144 is one of the neatest examples the writer has seen. The apertures are so formed as to bring out the outlines in the most graceful way.

Fig. 98 is a remarkable Tuscarora brooch, linking this type to the common lyre forms, not long since so abundant. It is large, and has the usual lyre base and sides, but, instead of expanding, it contracts at the top as in cordate forms. Fig. 125 is another small and odd Tuscarora brooch, which is somewhat contracted at the top, and unusually expanded at the base, where there is a short projection on each side.

Fig. 128 is a large lyre-shaped brooch in Mrs Converse's collection, on which she makes this note: "Uncommon. Found in Canada. Two hearts surmounted by a crown, symbolizing friendship." This one is unusually large, but the general type is one of the commonest on the New York reservations. The writer has seen large numbers of them; and, when Major F. H. Furniss was adopted by the Senecas in 1885, his future Seneca mother placed a long black ribbon around his neck, on which were 34 silver brooches of what the writer calls the lyre pattern. This had belonged to Red Jacket's wife, according to tradition. The necklace was considerably over three feet long, and the brooches were about an inch long and $\frac{3}{4}$ of

an inch wide. The original string had been divided some years before, and 15 of the brooches had been arranged on a ribbon in the form of a cross. This was given to Mrs Converse, who was adopted at the same time. The natural inference is that she referred to the size rather than form. Fig. 132 is also hers, but it is smaller and the base is different. It will be observed that what she considers the top of some of these the writer makes the base, thus changing the character.

Fig. 127 is the common size, and the writer had this from the Allegany reservation. It differs from the next mainly in the rounded points and small details of decoration. Fig. 129 was obtained from the same source. Fig. 130 the writer got of the Onondagas. It is slender for so large a size. Fig. 133, obtained with the next at the same place, is also slender and has rounded points. Fig. 131 is a large size, and has a remarkably angular base.

The class of brooches now to be illustrated by a few examples out of very many, is a very curious one, and definitely proves that ornament and not meaning was the great object in the manufacture and use of all. These ornaments, now to be considered, embody the square and compasses, with more or less accessories in the way of decoration, and sometimes these are highly conventionalized. The origin is plain when the resemblance is almost lost and this loss has led to some erroneous interpretations.

A friend writes:

> I fail to find in illustrations of jewelry ornamentation of either the French, English or Dutch, designs that have been actually followed in the hammered coin brooch of the Iroquois. In fact, I credit him with entire originality, very curious in some cases, and again there are suggestions of the white man's work ingeniously intergraven with his own conceptions of art not so rude or savage, that it has not developed genius and invention.

This question will not be discussed now; but it is true that the designs of Indian brooches for the most part seem American designs. It is very difficult—perhaps impossible—to find these designs practically anticipated in any other land. So much the writer had reason to believe. Then came a revelation concerning these Masonic

brooches, too many for Indians to use with any reference to their meaning. All these illustrations had been prepared, and work was progressing on these notes, when one day came a catalogue of curios from England, *The Amateur Trader* of Miss Clara Millard, Teddington, Middlesex. No. 4188 of this had an illustration which was the close counterpart of fig. 110 in size, form and details. The description is " XVII. CENTURY masonic emblem, in jargoons and paste. Exact size. £2 12s 6d." Was the Indian silver brooch copied from this, or this from the brooch? The same question might be asked of other forms. The silver brooch of the Indians did not exist in the 17th century, and the age of the above ornament may also be doubted.

After this was in print a learned German friend pointed out to the writer several brooches of what he said were Scandinavian and other types in his collection, but there has been no time to study the subject, and illustrations of this are not now recalled.

Out of a large number of these Masonic brooches, over a score have been selected for illustration, in themselves far more in number than all the Indian Free Masons known. Joseph Brant was a well known member of the fraternity, and Red Jacket has been claimed. There may have been a few others, but these were common ornaments. The writer has nine still in his collection, after parting with some to his friends. He might easily at one time have trebled the number. This abundance is proof that they had no significance to most of their wearers.

Fig. 124 was the first of these that attracted the writer's attention, and it now belongs to the Masonic Veterans of Central New York. The base is a half circle with ornaments, and above this the square and compasses are plainly seen. This was long worn by Aunt Dinah, a very old Onondaga woman. Traditionally it first came from Brant's family to her, and was naturally supposed to be a jewel worn by him. Now that the form is known to be so common, this may be doubted.

Several examples follow from Mrs Converse's fine collection. Fig. 108 adds many things to the simpler form, which is easily detected under these accumulated ornaments. Several fine bosses add to its effect. The forms of apertures used in this appear in several

others. Fig. 110 is a smaller and simpler form, almost identical with the English one mentioned except in material. Like that, it has a curved base, and the sun and moon between this and the square. Another interesting thing in connection with this is mentioned by Mrs Converse. She said: "It was given me by the grandson of Red Jacket. It proved from that Red Jacket was a Mason, and wore this brooch for pass. In further investigation, while working at the Red Jacket monument at Buffalo, I heard of a man who had sat in a lodge with the great Sa-go-ye-wat-ha." The brooch hardly proves this, the other evidence is hearsay, but, if Red Jacket was a member of the craft, it would appear on some of its records. He was too well known to be easily overlooked in such a matter.

Fig. 113 is smaller and less elegant, but has the same features in a more conventional way. Fig. 117 is larger and more elaborate. Fig. 119 is one of the simplest forms, having but two apertures, but these are large. The surface is covered with tracery. Fig. 120 is quite conventional, but the leading features of other forms are readily detected. Fig. 126 is simple, with but little surface decoration.

Fig. 109 is a Seneca brooch, differing from some other elaborate ones only in minor details. This has six bosses, which are smaller than in most others. This and the next are in the Richmond collection. Fig. 114 is a large and quite frequent form with many accessories. By omitting the outside loops the design would become much like those of a simpler and more distinct character, a fact easily tested. Fig. 106 shows a fine example from the Tuscarora reservation, having 15 large and small bosses. On either side, at the top are angular projections, terminating in embossed ends. These adjuncts belong to several. Fig. 111 is in the Richmond collection, and presents the feature mentioned in a less common way.

Fig. 116 is in the Buffalo collection, and is one of the rarest of these small forms, as well as one of the most beautiful. Did it stand alone, its character might not be understood, but in a series this is evident. The base has a border of small bosses, except in the middle, and the lateral projecting points at the top are terminated by others. The tracery adds some peculiar features to the design.

What was said of the character of the last seems partially true of the Tuscarora brooch in fig. 122. Its Masonic character is extremely obscure taken by itself, but a comparison with others on the same plate reveals a strong likeness to them.

Fig. 112 shows a very fine embossed brooch at Onondaga, having projections at the base. All vary in details and somewhat in outline. The simpler forms have a uniformly curved base; others add various ornaments.

The remaining illustrations of this class are from the writer's collection. They are usually large and have been quite abundant. Fig. 118 is highly conventional, but otherwise quite plain. Fig. 107 is the smallest that has met the writer's eye. It is embossed, and has the general character of some of the larger forms, but the base has a series of broad curves between the bosses. Both these are from Onondaga, and all but one of those which follow. Fig. 115 is a frequent and rather plain form, with some conventional features. The writer obtained four of these out of a number like them. Fig. 121 shows the original features of the class more plainly, and is very neat in design and finish. The base is a simple curve. Fig. 123 adds the interior bars found in several others, and has projections at the base. Fig. 152 was obtained at Cattaraugus, and is an elegant ornament in every way. At the top it has the rare feature of red glass neatly set. Fig. 159 shows one belonging to Mrs Converse, which has a glass setting near the center of the base. It is quite conventional. The glass setting has been observed in very few. So many of this class remain that the numbers must once have been great

One fine and unique article, obtained by the writer from an Onondaga woman, is shown in fig. 223. It is a large silver pendant, with a center of green glass of diamond form. The edges of the pendant are parallel with this, but have broad expansions opposite the angles of the glass, giving it the appearance of an equilateral and massive cross.

A few examples are given of a class once very abundant, and much used for adorning ribbons. They differ very little in outline, but very much in details and size. The figures illustrate the largest and smallest in the writer's collection. They might be called either quadrilateral or octagonal, for the broad angles form four short

sides having indentations. The sides proper consist of two bars, concave in outline, uniting so as to form a broader, ornamented surface at each angle. The buckle crosses from point to point. Those represented are all from the Onondaga and Tonawanda reservations. One unique form is not described.

Fig. 164 is the smallest the writer has seen. The angles are ornamented with lines and small circles. Fig. 163 is the largest in his collection, and may be as large as any. The surface ornaments are like the last, but the divisions of the angles are more protuberant than usual. Fig. 161 has surface ornamentation nearly all over. Fig. 162 is plainer. Fig. 165 and 167 have both bars ornamented, but not the angles. They are among the handsomest collected. Fig. 166 is much like these, but the angles are ornamented.

The writer has a few simple silver brooches, which are open and almost as slender as those which are simple rings or round buckles, but they are angular. Fig. 134 shows one of these which is square, but with the angles rounded. The tongue of the buckle reaches from one of these to that opposite. Fig. 135 is a similar one which has the angles indented.

The Onondagas call the brooch *Ah-ten-ha-né-sah,* shining ornament.

Headbands

The silver headband is a long strip of sheet silver, straight on the lower edge but usually with points of some kind on the upper, and with some pretty pattern between. The Onondagas call these *Ta-yone-non-aich-han-hust'-ah.* The whole headdress, which once often included this, was called *Gos-tó-weh* by the Senecas. Part of this, as given by Morgan, but without feathers, is shown in fig. 157. Quite commonly, however, the headband encircled an ordinary hat, and in this way the writer has seen several used by one person, one being placed above another. Usually the wearer had but one, which served as a foundation for other ornaments. They were secured by strings in the holes at the ends.

They are now difficult to obtain. The writer's inquiries on several reservations have been unsuccessful, nor can they now be found among the Iroquois of Canada. That the State Museum has now several of these rare articles is due to the intelligent zeal

of Mrs H. M. Converse, whose opportunities have been exceptionally good, and whose own fine collection of silver ornaments is well known.

Fig. 386 is a Seneca headband drawn by the writer, and reduced from the actual size, like all those which follow. The six others illustrated are in the State Museum, and were carefully drawn there from the objects themselves. They are faithful representations of these.

Fig. 399 is 1¾ inches deep. The upper edge is cut into half circles, inside of each of which is a triangular perforation. Alternating with each of these, below is a line of vertical hearts, cut through the band. Another line of narrow openings is below these. Fluting and tracery elsewhere adorn the surface. Fig. 400 is narrower, and has embossed points on the upper edge. There is a central row of narrow elliptic openings, and some tracery. Fig. 401 has similar points above, narrow elliptic openings below these, and a line of open hearts farther down alternately point toward each other. Fluting and tracery also appear. This is about 1½ inches deep.

Fig. 402 is of the same depth, and has broad crenulated lobes above with tracery following the outline. In the center of the wide lobes are kidney-shaped or broad cordate perforations, pointing upward. Below each of these is an open diamond, cut horizontally and with a boss at each angle. Alternate with these are open hearts pointing upward. Fig. 403 is a narrow and simple band, the only decorations being fluting. Fig. 404 is 1¾ inches deep, and has very broad crenulated lobes above. There is a central line of alternate perforated stars and diamonds, with some fluting and tracery. The state collection of these is a very good representative one, but among those formerly used there must have been a great variety of detail.

Miscellaneous

Some ornaments occur which can not be classified. Fig. 156 is one of these, and was found on Indian hill in Pompey in the year 1901. It is of pewter and is V-shaped, with the angle rounded. There are protruding angular points and bosses. Another of similar character has more the form of a buckle. Broken iron, brass, and pewter buckles are sometimes found.

A handsome ornament of variously colored beads was also plowed up on Indian hill in Pompey the same year. The beads were kept in place by the brass wire on which they were strung. There was a large circle of these, with several pendants of beads attached. In 1902 the writer found there other glass beads, preserved on brass wire.

Fig. 224 is a large open heart of brass wire from Fort Plain. A wire loop is soldered in the angle above. Fig. 225 is a heavy copper pendant, found on the sand plains near Rome N. Y. Of this two views are given. The disk below has a large ring in the heavy loop above. This may have been of the 17th century, or early in the 18th.

Of about the same date is a fine brass ornament in Mr Stanford's collection, $3\frac{1}{4}$ inches long by $1\frac{1}{3}$ wide. The upper half is lyre-shaped and open; the lower open and circular, but with a projection at the base. Both halves form one piece. In the openings hang open, six pointed stars, nearly filling the space. Fig. 395 shows this. It suggests an ornament from harness.

Fig. 285 is from Indian castle in Pompey, and is a flat and narrow piece of brass, rounded on the upper surface and terminating in a trefoil at the broader end. Near that end is an elliptic perforation, which may have been for attachment or suspension, but probably the former. Fig. 380 is a broader article of the same kind, and from the same place. The lobes of the trefoil are rounder, and the perforation is circular, as in most other cases. Still another is from the same place. In every case meeting the writer's eye, the base has been broken.

The Onondaga specimens might have been worn in the hair or attached to the dress, being straight. Mr Stanford's specimens, at Munnsville, require a different view. In two of these, longer than those from Onondaga, the base is abruptly bent upward. Each of these is about $4\frac{1}{4}$ inches long. A third is of quite a different character, and not far from the same length in a direct line. Two abrupt curves make the actual length much greater. Viewed from the side, it suggests the curved handle of an old-fashioned door-latch, or the handles sometimes used with shawl straps. About the middle of this curve it is nearly $\frac{3}{4}$ of an inch wide. There can be little doubt that this was an ornamental handle of some kind. The others may have had a secondary use after being broken.

Fig. 286 is a neat little article of brass, found a mile west of Canajoharie. The portion ornamented with cross lines has the outline of a broad trowel, and there is a narrow rectangular base. There are no present means of attachment, and it may once have been longer, though showing no signs of breakage.

Fig. 287 is a slender and angular piece of copper, which is evidently a fragment. Its general form suggests that it may have been one of the tobacco tongs, often given to the Indians. This came from Indian hill in Pompey. A heavier one, of slightly different form, is in the Stanford collection.

One odd relic from a recent Cayuga site is a silver watch seal of considerable size. The handle is in the form of a dolphin, and the seal has crossed arrows between the letters K. M. This might have come among the spoils of war, by gift or purchase. With its Indian owner it was merely a pretty ornament, easily suspended and worn. Such an object would be attractive to any savage mind when plunder was to be had. But nothing that an Indian might carry off need excite surprise. When the Huron towns were destroyed in Canada in 1649 and 1650, and two of the missionaries were killed, the Onondagas carried off two little books belonging to the latter, and Father Le Moyne recovered them at Onondaga in 1654.

Though not ornaments, there are figured here several unique recent copper relics which have been lent the writer at the last moment. They are in form like the old bone needles, flat and perforated, and of interest as a survival of an early form in a later material, like the conical and triangular arrowheads of copper. As nothing of the kind has ever been described before, it seemed best to include them now. These are from Indian hill in Pompey, and they have been reported from no other place. They are about as thick as needles of bone, but rather wider than most of these. Fig. 376 is broad, and is broken at the perforation. Fig. 377 is narrower and has a rounder point. It had two perforations. Fig. 378 is longer, and has a long and narrow hole. Fig. 379 is unperforated, and is pointed at both ends. Such needles have been used in netting snowshoes. These have since been placed in the State Museum. Their age is not far from 250 years, and they are all that the writer has anywhere seen.

Addenda

Since the bulletin on bone articles was prepared, a number of interesting relics have been reported. The finest of these are in the small collections of L. William H. Klinkhart and his friends, in Canajoharie N. Y., and were all found in that vicinity. The writer has examined some of them. One small and broad bone comb has three human heads projecting above the upper rim in a curved line. This is about 1⅜ inches high. Another terminates above in a long-bodied quadruped in a standing posture. Below the opening are two human faces. This is more than double the length of the last, being over 3 inches high. It is from Wagner's hollow. Another may be a pin, or part of a comb with a single long and perfect tooth remaining. One tooth certainly has been lost, but the fracture has been repaired, and the part is neatly finished where it might have widened into a comb. The top curves, and two human faces are in the open work below the upper rim, as in the last. This fine article is 3⅝ inches high, and came from the Otstungo site. Its importance is in showing the resemblance of some work on this early site to some of clearly historic date.

A human figure of horn has the hands under the chin, and the head is disproportionately large. It is 2½ inches high and was found at Wagner's hollow. There are the usual awls; perforated beaver and elk teeth, cylindric bone beads, perforated deer phalanges, some of which are fine. The longest awl is over 8 inches in length. One conical bone point has a lateral perforation. This article is over 3 inches long, and came from the recent site in Rice's woods.

One fine bone harpoon has two long barbs on one side, and is perforated. At the broad base are longitudinal grooves, like those on a harpoon of Mr Richmond's from the Mohawk valley, but more and longer. Another of the same length is about half as wide at its plain base. This has two barbs on one side, and on that edge is a projection in which is the perforation. These notable harpoons are each 6⅜ inches long, and come from Wagner's hollow, where others have been found.

The occurrence of a much worked *Fulgur carica* on the Cayadutta site is of interest, as marine shells are rare on early Iroquois sites in New York. The base, outer whorl and some projections have been cut away, and a long slit cut in the remainder toward the base. The

whole shell shows age. This was found by Mr Percy M. Van Epps of Glenville. In his collection and those of his friends, the writer found many interesting articles, mostly of stone. As the Mohawks had no towns in Schenectady county, pottery is rare there, as well as recent articles.

The Bigelow collection has received a number of the curious ornaments made from the concave and convex ends of bones, pierced for suspension. They are from Pompey sites of the pre-colonial period. One retains traces of red paint. One massive and carved bone bead is from the Christopher site. Mr Bigelow has also recently obtained a fine tube from near Three River Point, and a banner stone from Savannah N. Y. Both are of striped slate. A bayonet slate weapon and a remarkable flattened bird amulet are among his recent additions.

Mr Theodore Stanford, of Munnsville, has a fine cylindric bone arrowhead with barbs, and also a worked bone, about half as thick as wide. This is 3 inches long and an inch wide at the broad end, which is notched all around. Near that end is a lateral perforation. The general form is flat, with rounded edges.

The writer has also examined Mr R. D. Loveland's fine collection in Watertown N. Y., which is rich in clay pipes from neighboring forts. A few have stems fitted to bowls which were found on the same sites and are of the same character. They are not always certainly parts of the same article, though of the same age. Some perfect examples are unique, as well as some imperfect. One of the former, a small clay pipe, is like a high shoe in outline, but much compressed. Dr A. A. Getman has a broken one of similar form. In September 1901, the writer was present when Mr Oren Pomeroy took out of a Jefferson county camp site a fine clay pipe bowl, having a human face before and behind. This form is rare. On the same visit, Dr R. W. Amidon presented him a small clay pipe bowl, perforated for the insertion of a stem.

In the Loveland collection one peculiar long and broad flat awl has deep notches on each edge above the base. Another fine example has been beautifully mottled by fire. A bone arrowhead is one of the remarkable articles in this collection. It is angularly shouldered but not strictly barbed, and has a long and moderately slender perforated tang. Recently Mr Loveland obtained a pipe

resembling fig. 220 of the bulletin on earthenware, with several fragments. Three examples of a curious canoe-shaped pipe bowl have also been found by him. Unio shell beads are also now in his collection.

Two articles are of high interest, though simple, and will be illustrated later. They are of carved wood, which fire has charred but not destroyed. With one exception they are probably the oldest remains of this kind in New York.

Several interesting collections have been examined in and about Glenville N. Y., through the kindness of Mr Percy M. Van Epps. In one of these is a woman's knife unfinished, of the red slate of Washington county, showing that it was made not far away.

Several fine bird pipes of stone have been found, one of which is in Col. Camp's collection at Sacketts Harbor, the gem of which is a massive and highly polished stone pipe resembling a flying squirrel. It is $6\frac{1}{2}$ inches long, by $2\frac{5}{8}$ broad. He has also a thin and highly polished stone tube. A beautiful shell gorget comes from Savannah N. Y., and is nearly 4 inches across. Other interesting finds will not be mentioned now.

At the last moment a supplementary note seems required. In September 1903 Mr John Mackay, of Niagara Falls, opened an ossuary of the Neutral nation close by the Tuscarora reservation, of the approximate date of 1620. Iron axes and brass kettles were found in this, shell and metallic ornaments, sword blades and pipes, with a few glass beads. The metallic beads were made from strips cut from old kettles and rolled into cylinders, from 2 to 11 inches in length. Of more interest were 24 rude rings of the same material, most of them rolled into cylinders and bent into a circular form. A flat one served for a finger ring and still encircled the finger bone. The others were larger, from $\frac{7}{8}$ to $1\frac{3}{4}$ inches across, some overlapping and some just meeting at the ends. A large one is $2\frac{1}{2}$ inches across, doubled, beaten flat, and then brought into a circle like the rim of a hat. A strip of metal is folded over the ends and also beaten flat.

The writer obtained one unique brooch too late to figure or describe, to which reference has been made on page 94. It may be called of a diamond form, each side being a narrow bar, curved over outside at each end and forming a short hook. It measures $1\frac{1}{8}$ by $1\frac{1}{2}$ inches.

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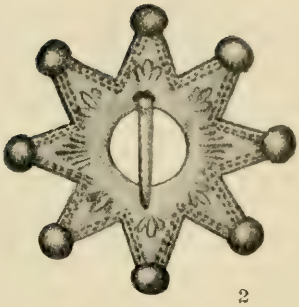

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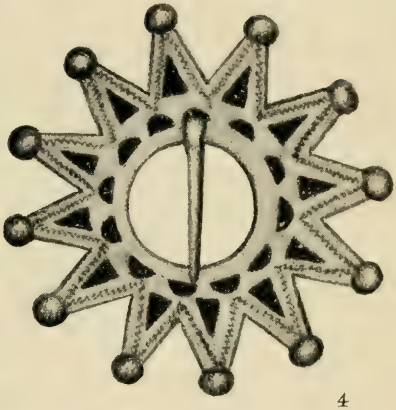

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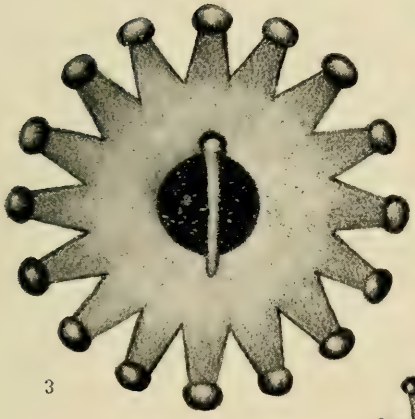

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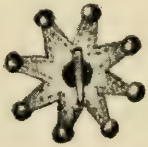

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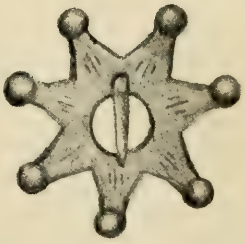

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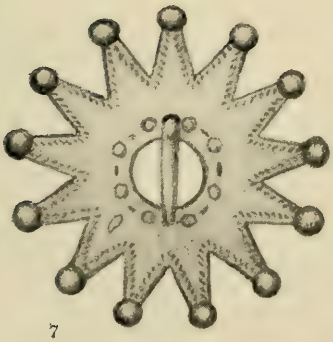

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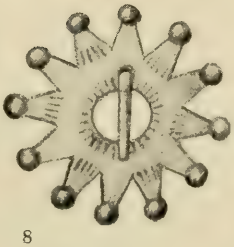

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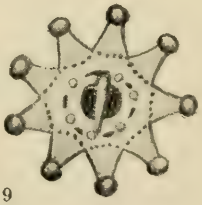

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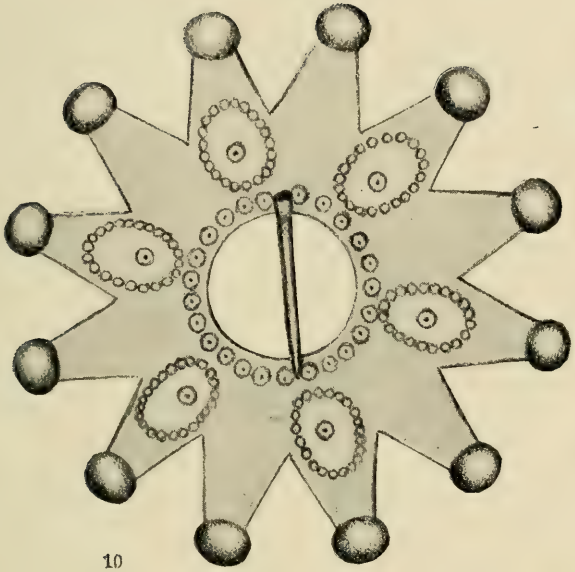

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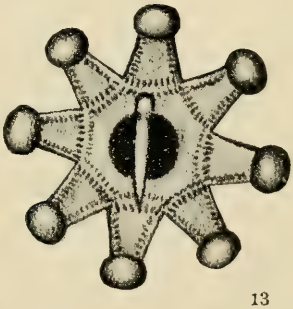

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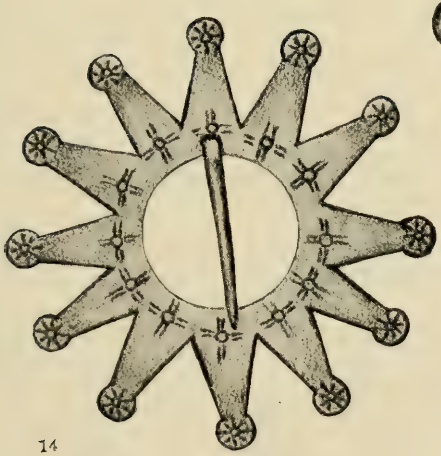

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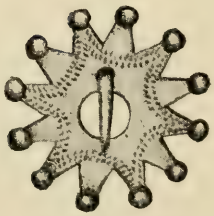

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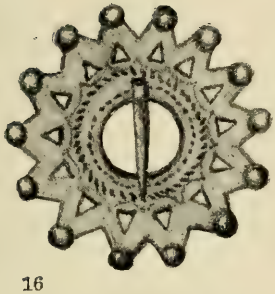

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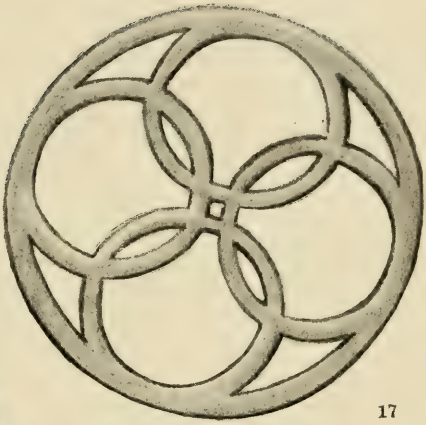

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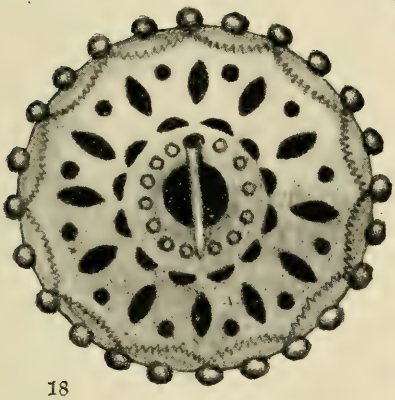

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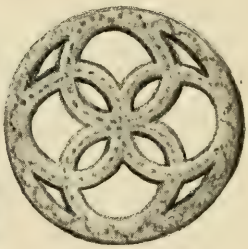

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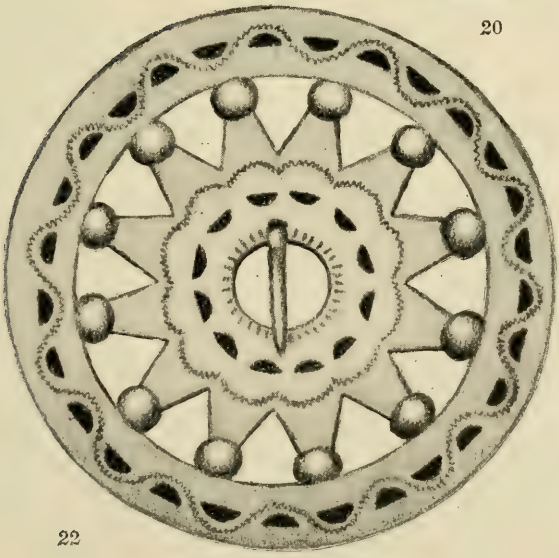

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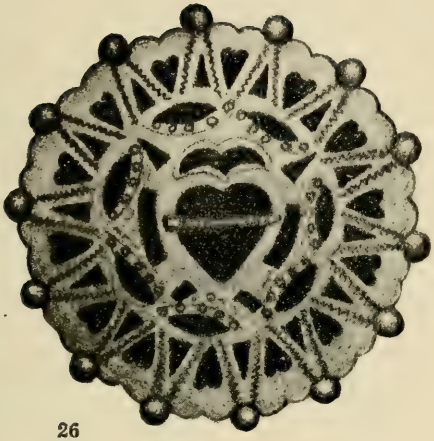

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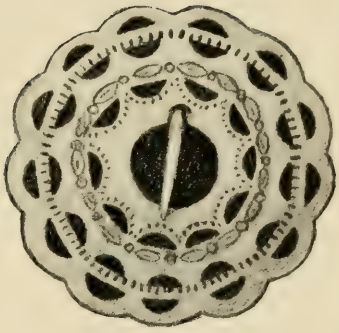

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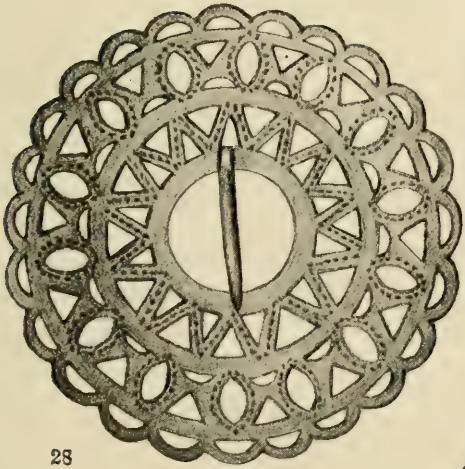

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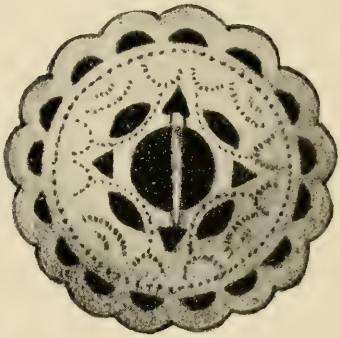

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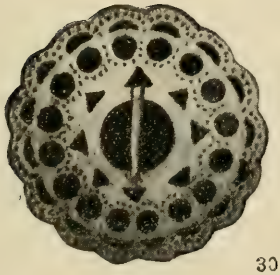

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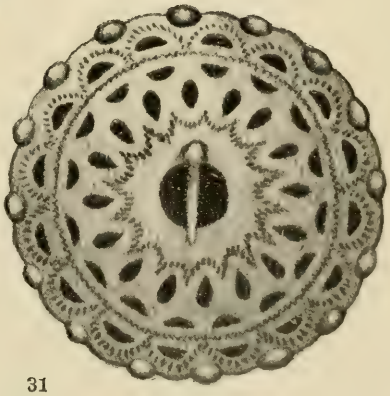

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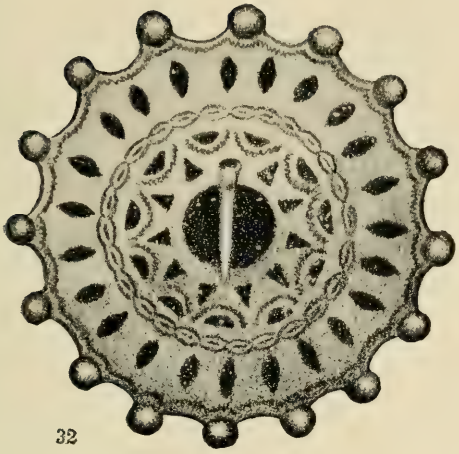

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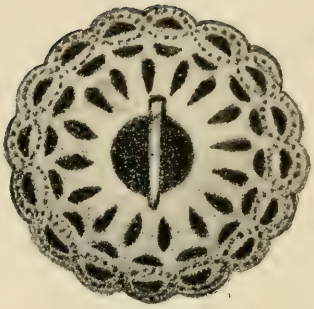

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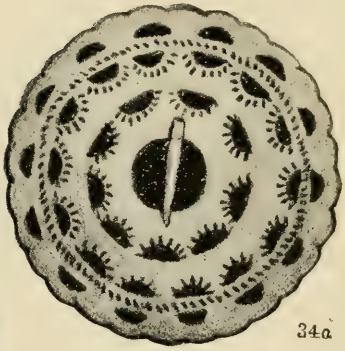

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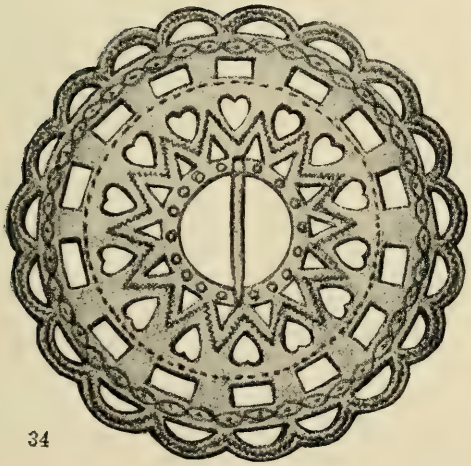

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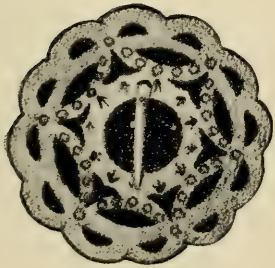

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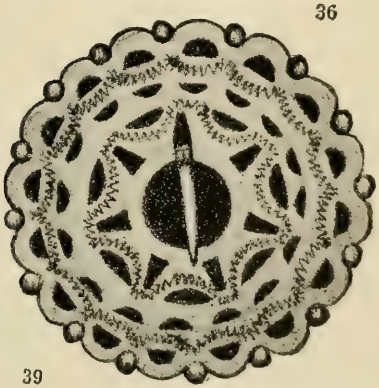

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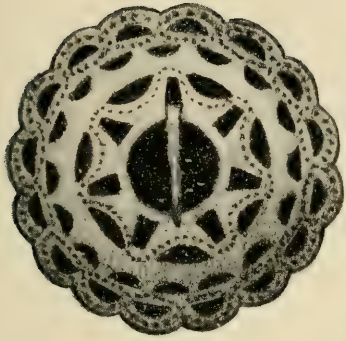

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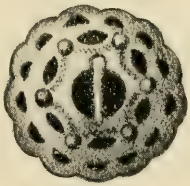

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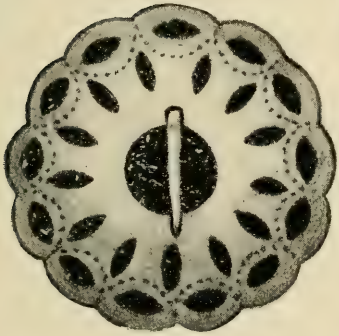

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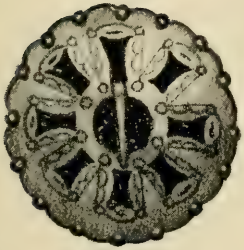

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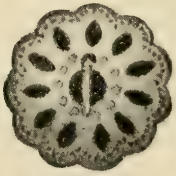

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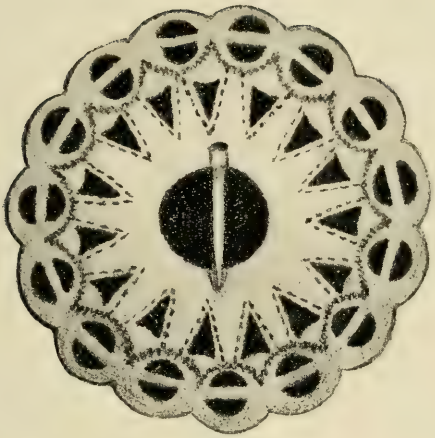

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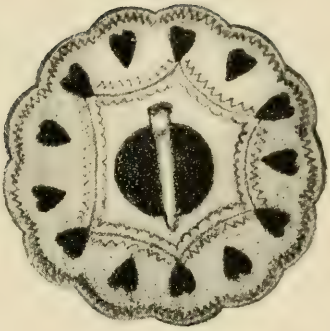

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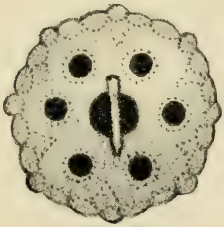

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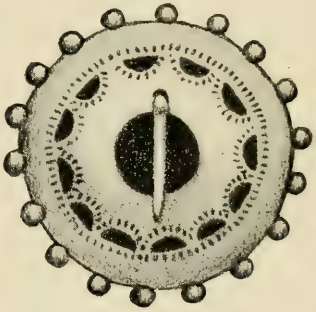

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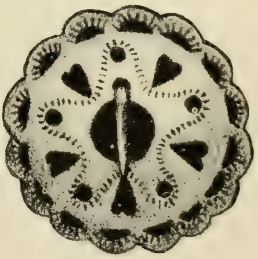

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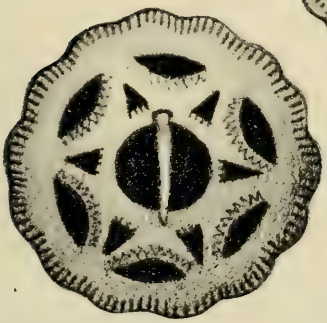

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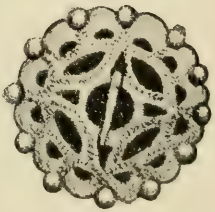

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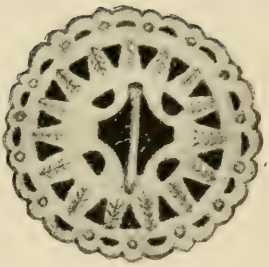

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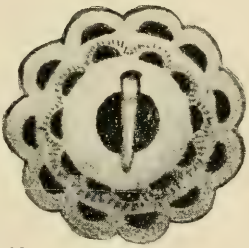

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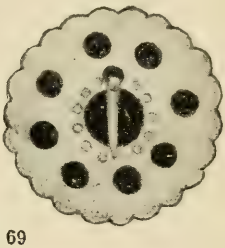

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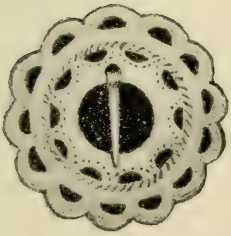

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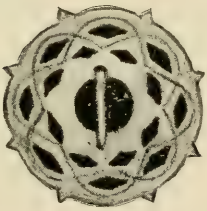

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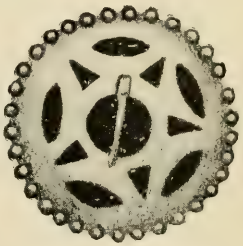

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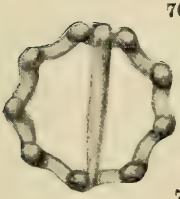

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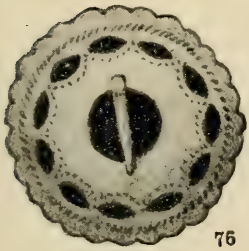

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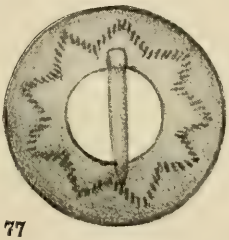

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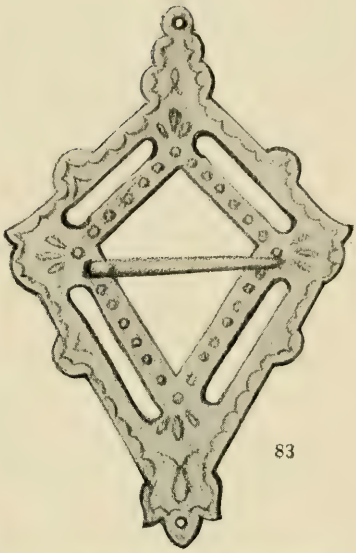
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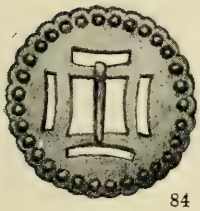
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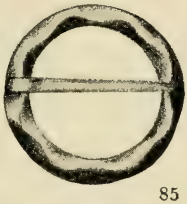
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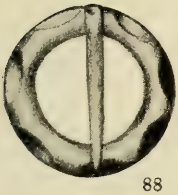
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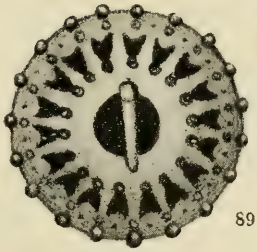
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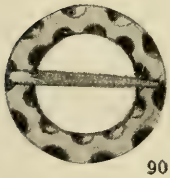
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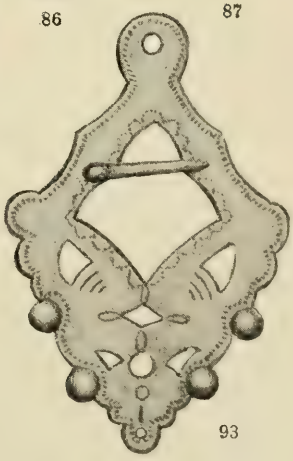
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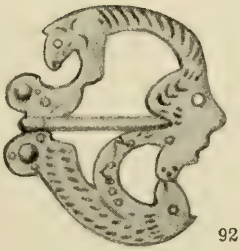
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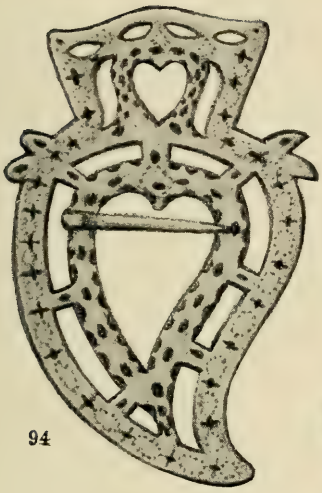

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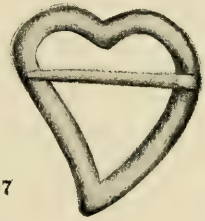

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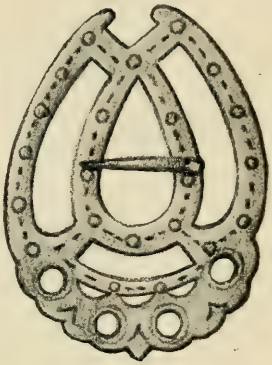

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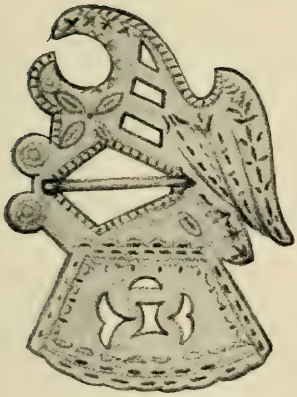

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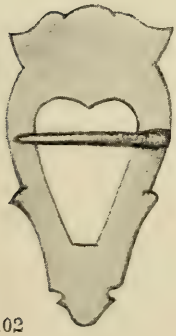

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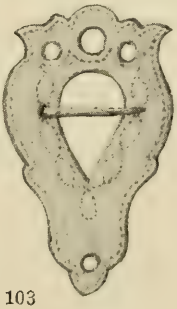

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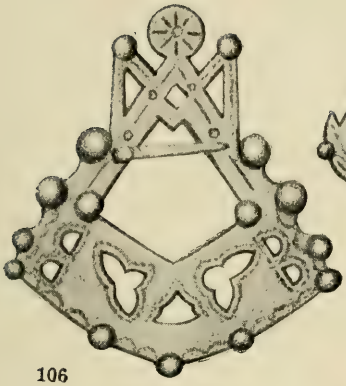

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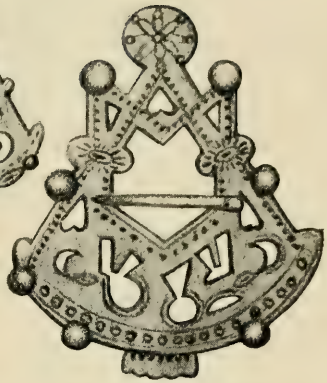

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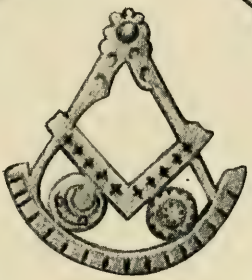

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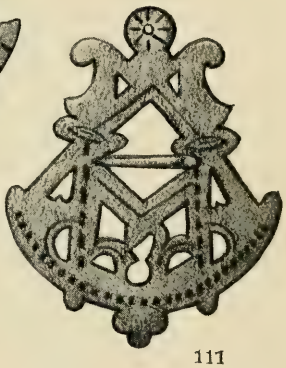

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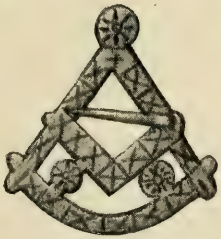

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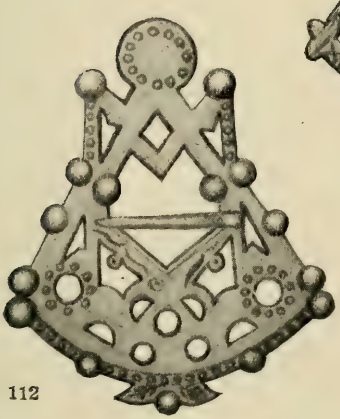

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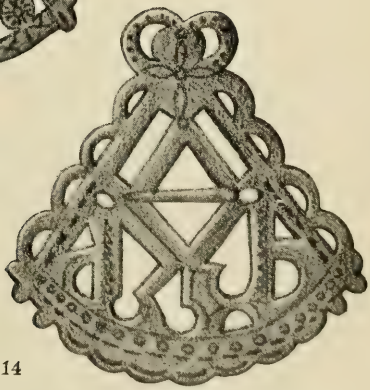

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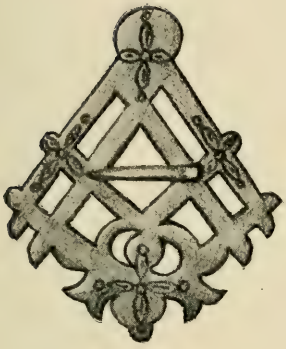

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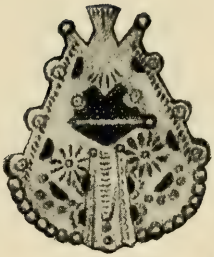

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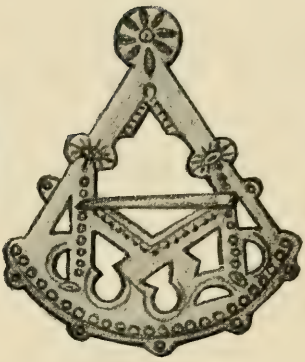

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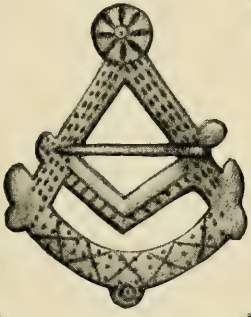

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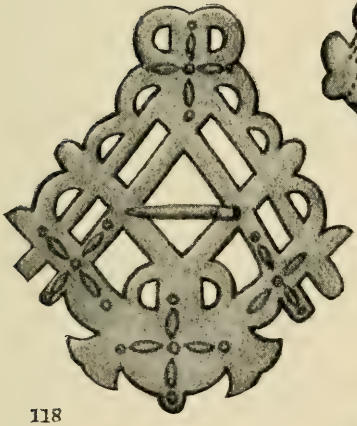

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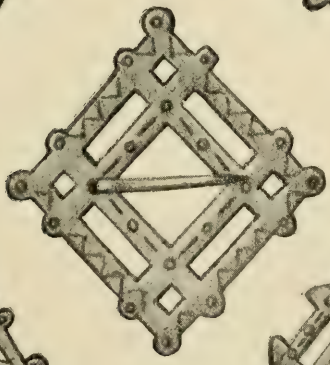

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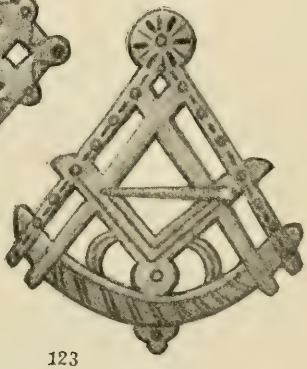

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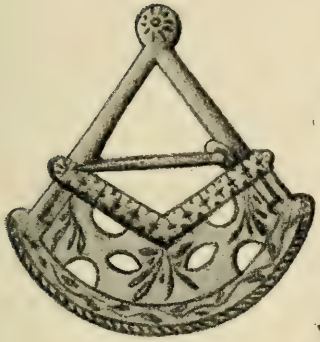

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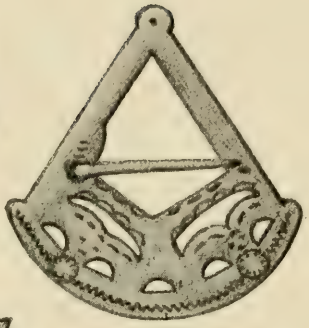

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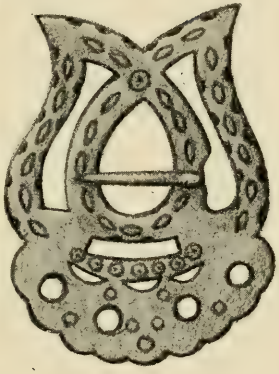

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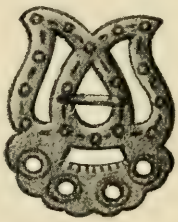

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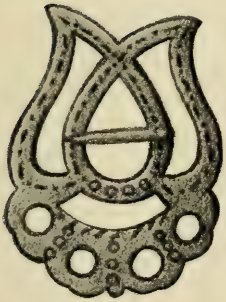

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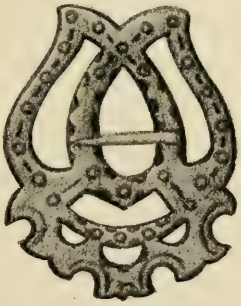

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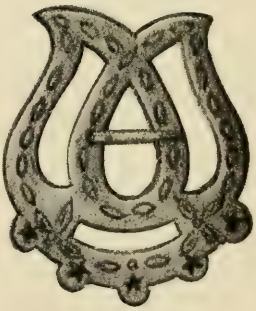

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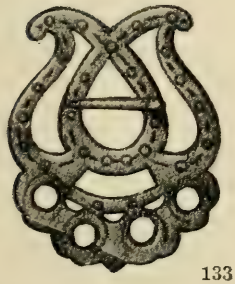

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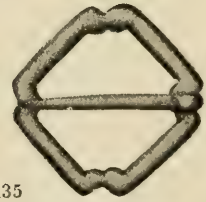

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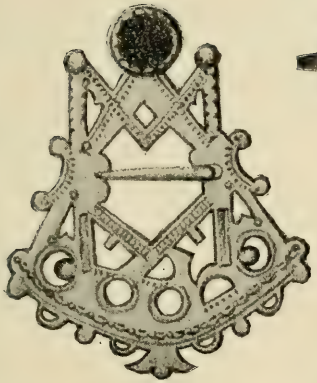

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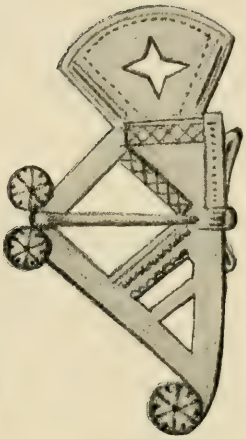

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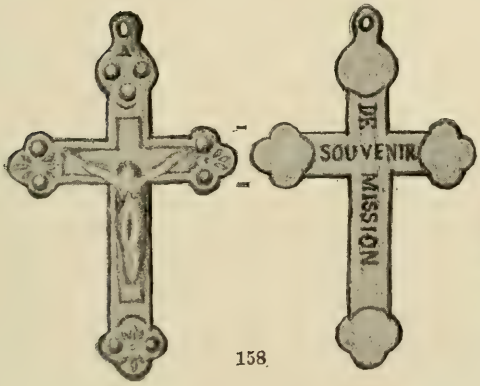

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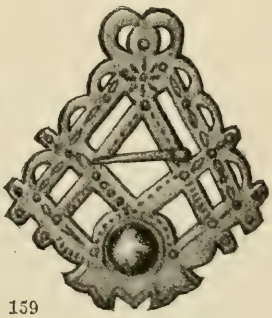

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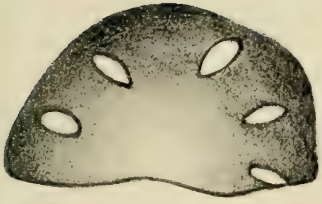

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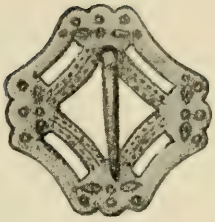

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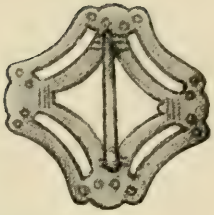

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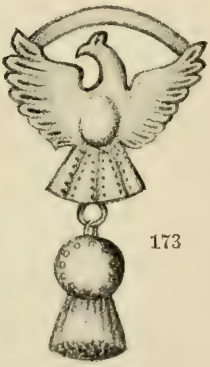

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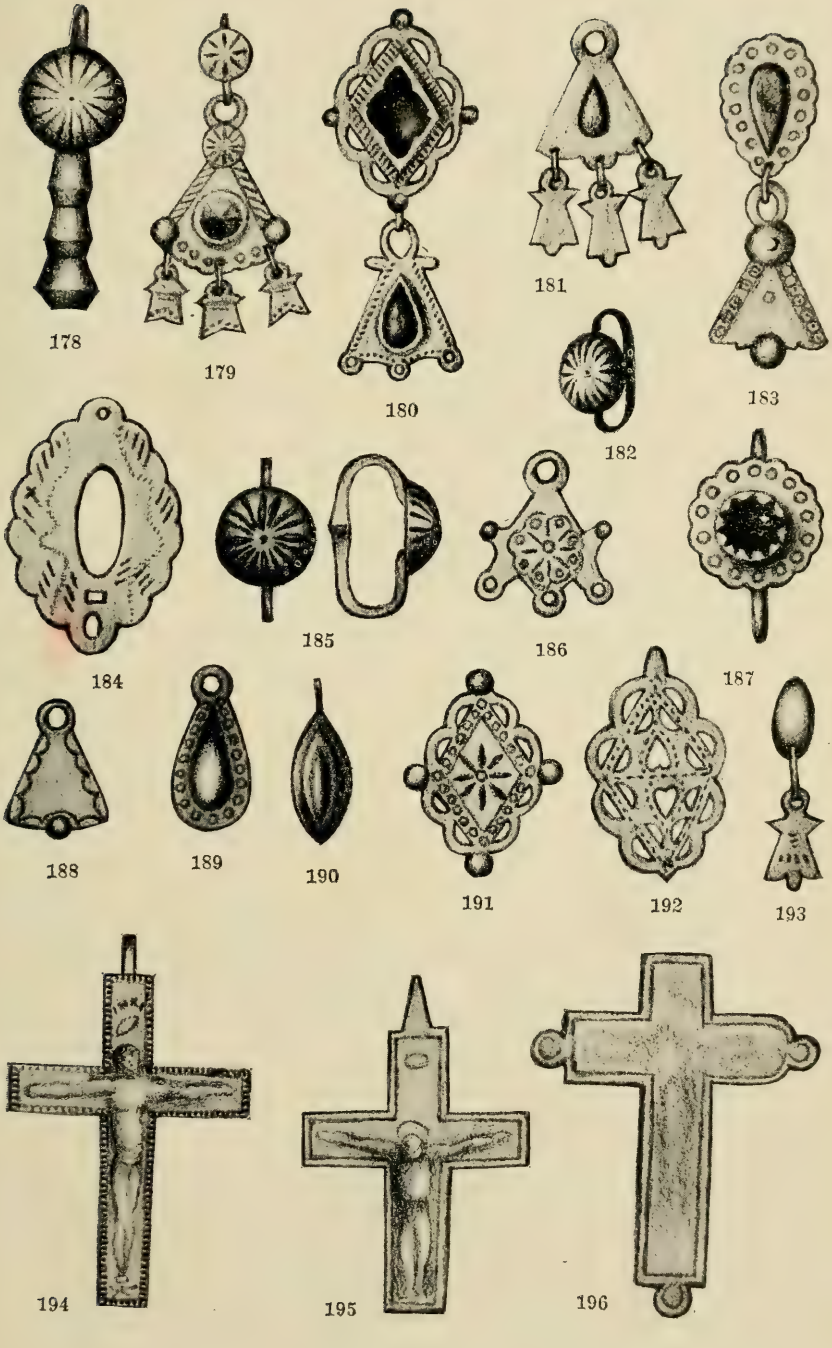
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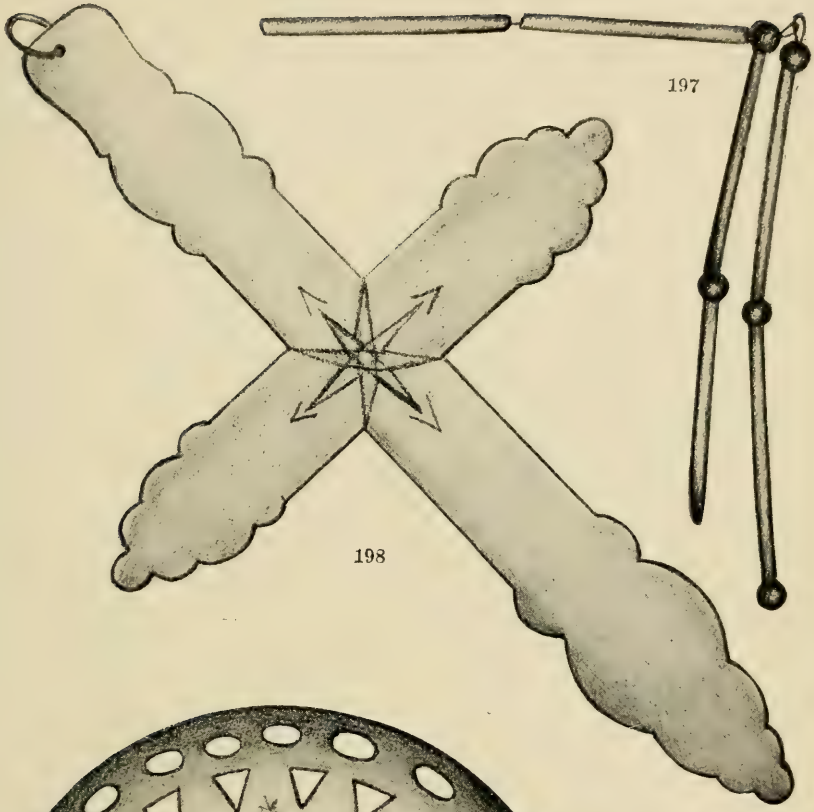

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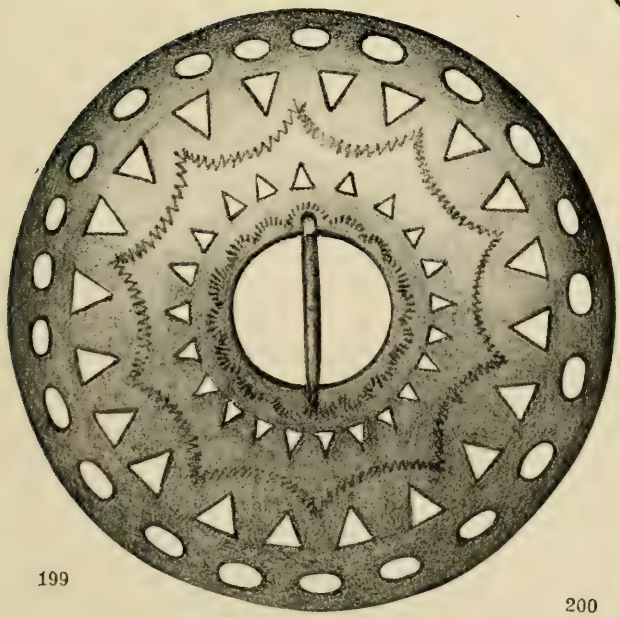

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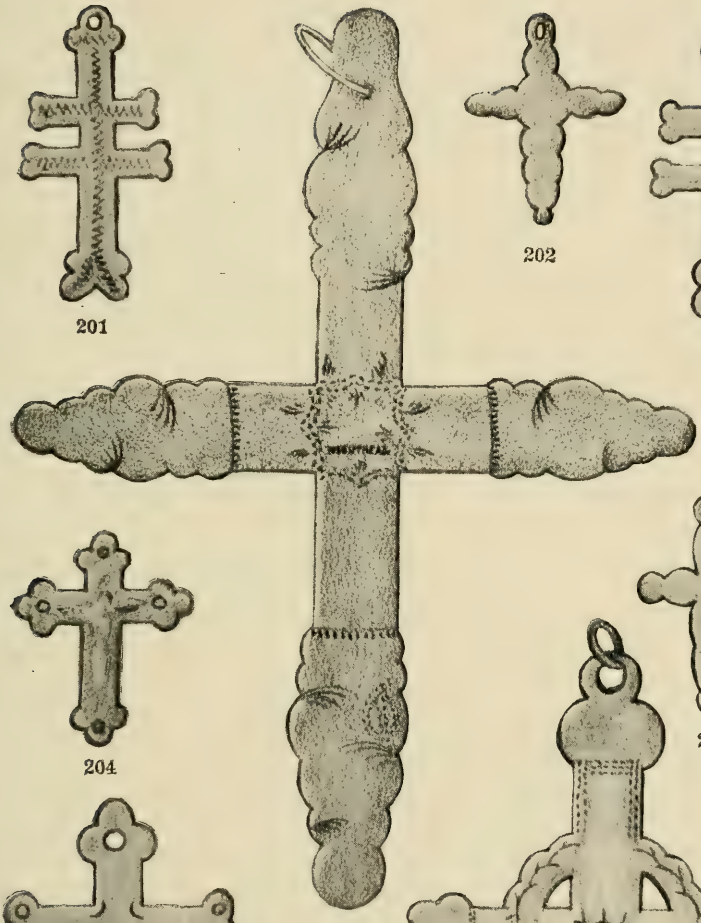

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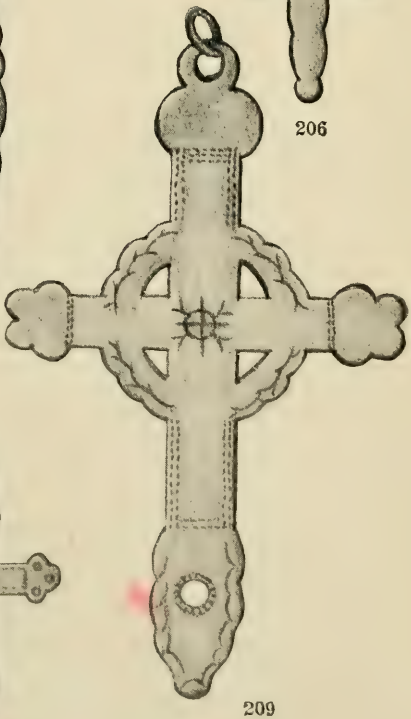

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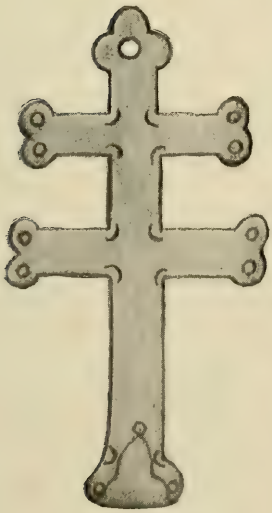

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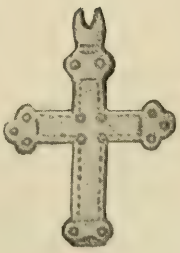

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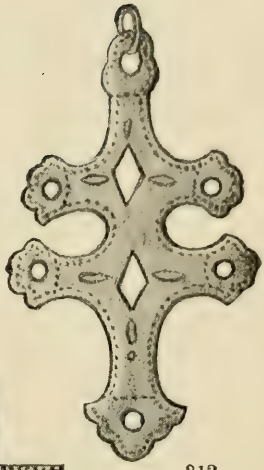

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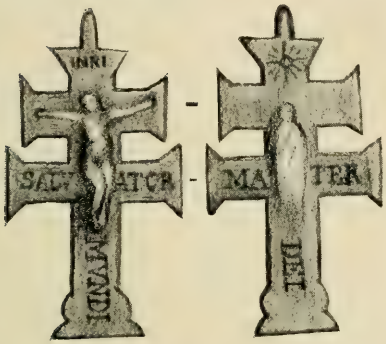

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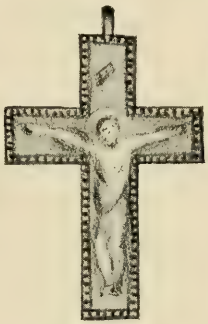

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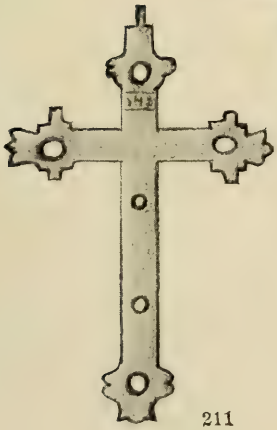

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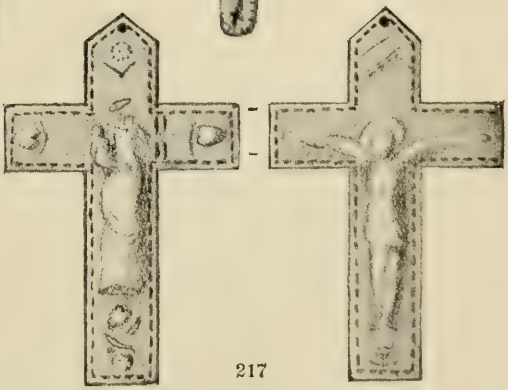

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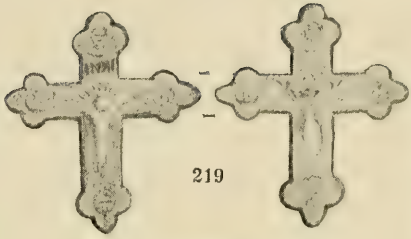

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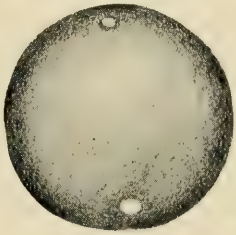

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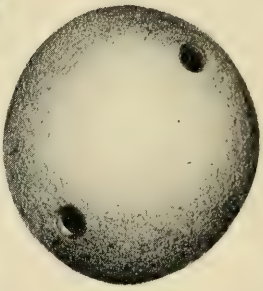

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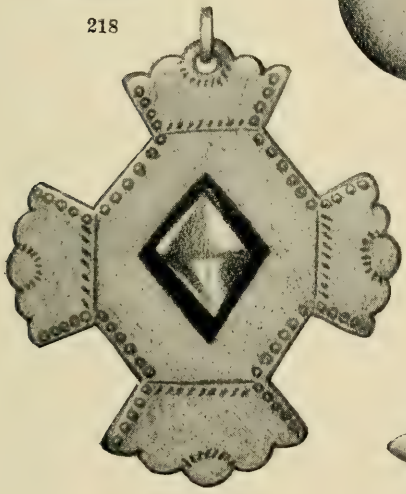

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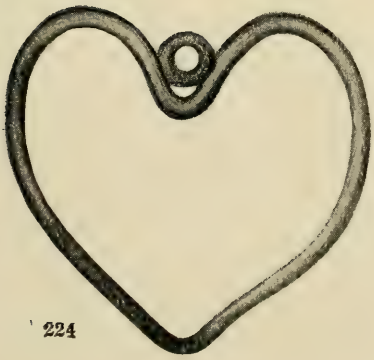

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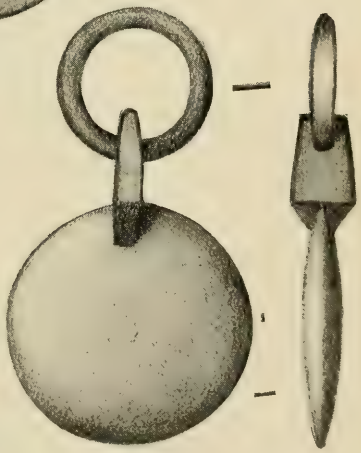

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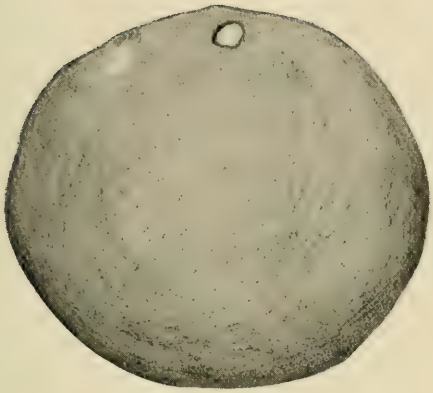

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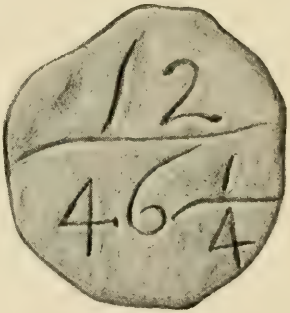

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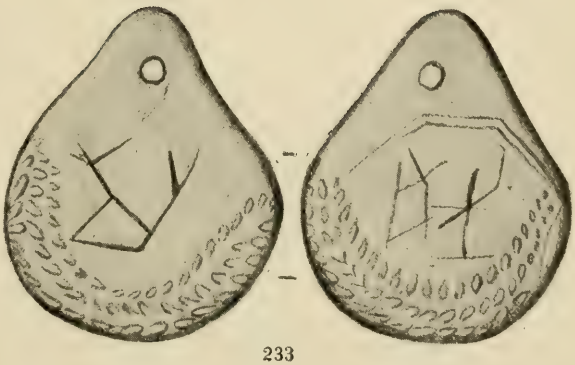

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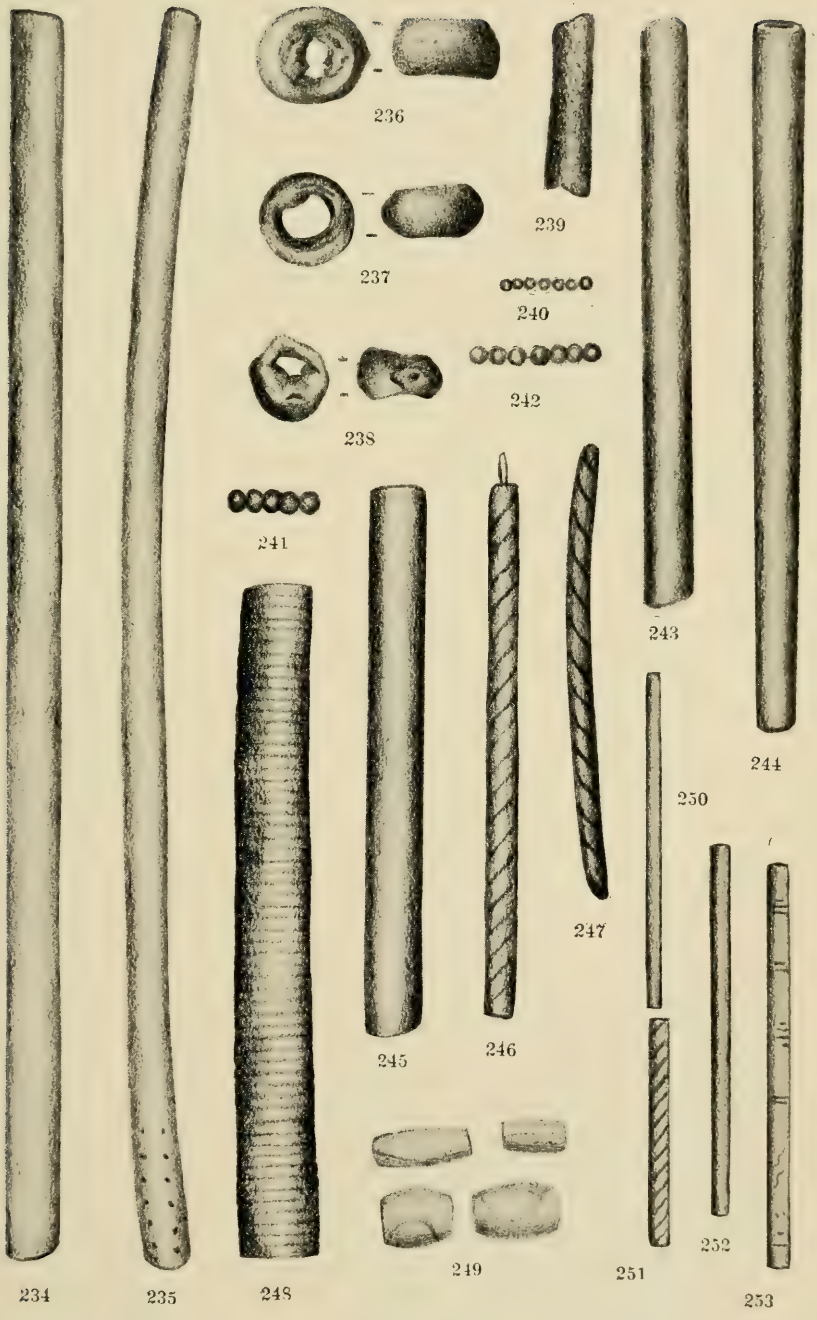
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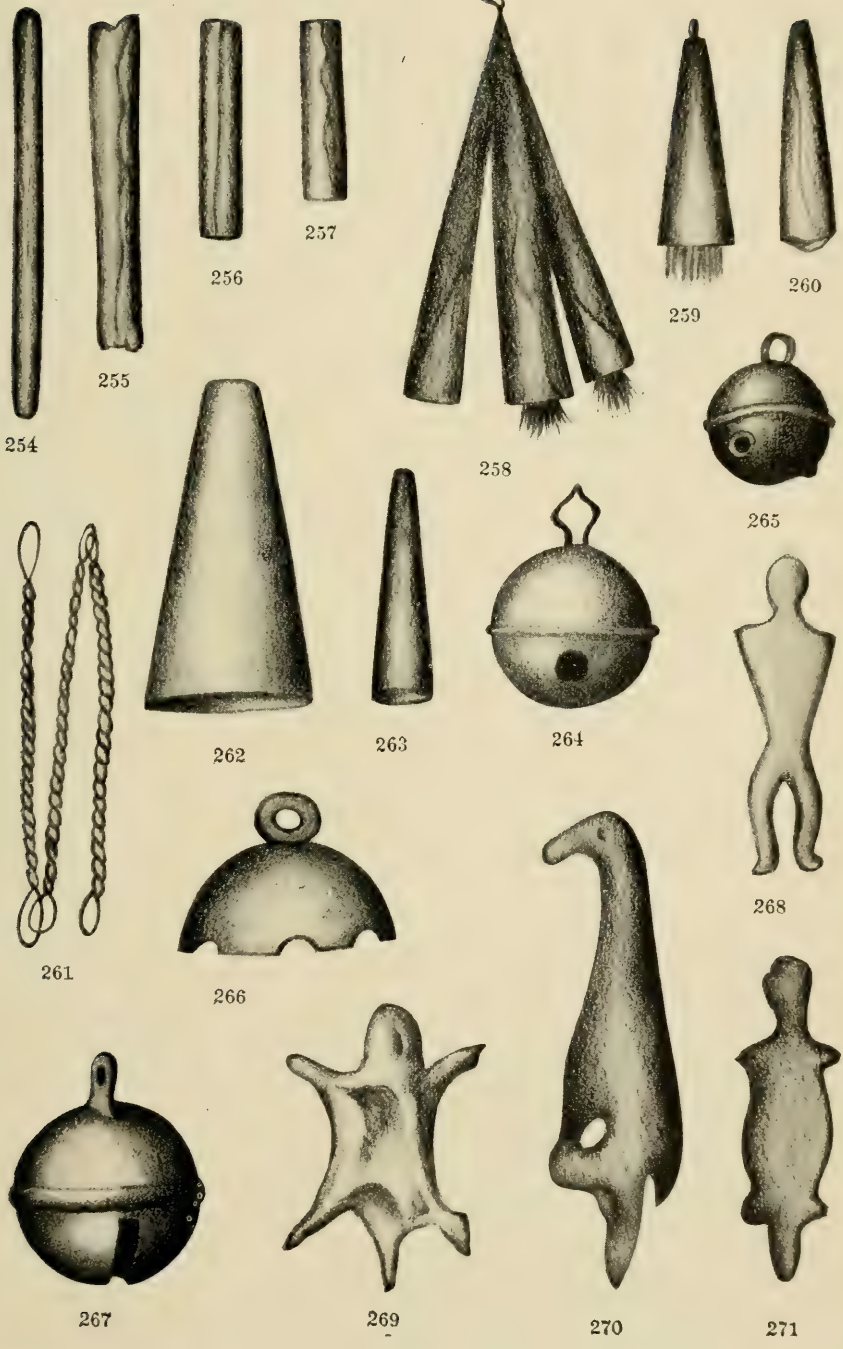
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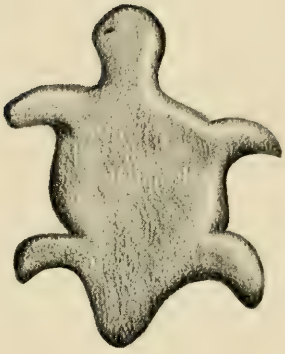

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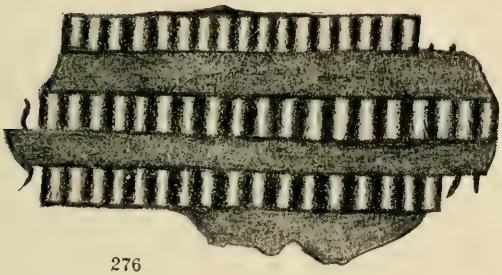

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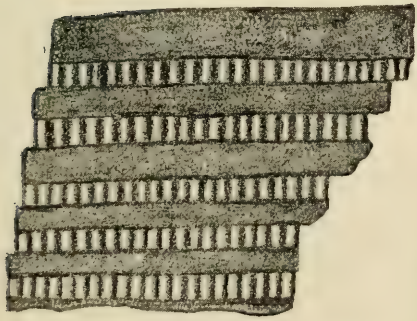

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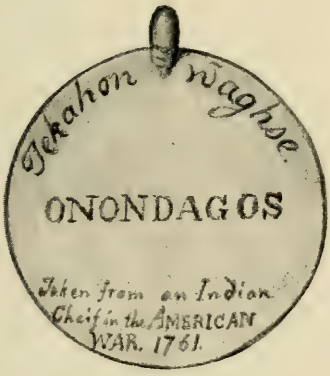

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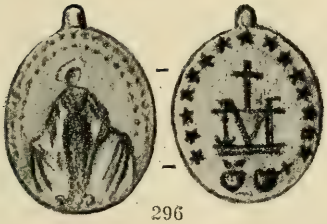

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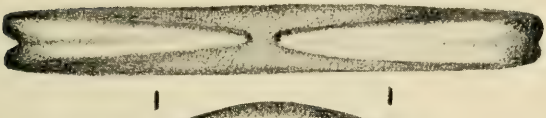

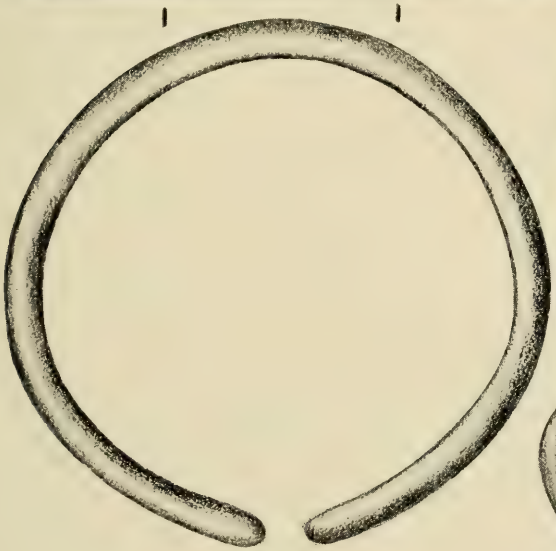

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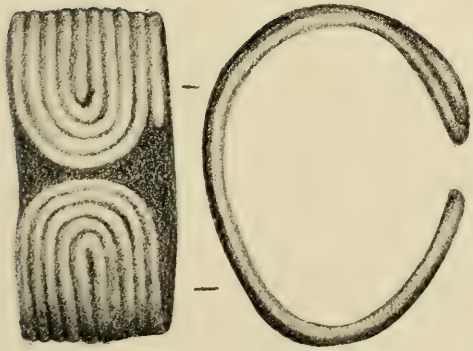

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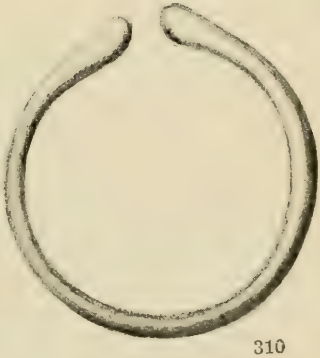

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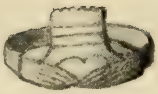
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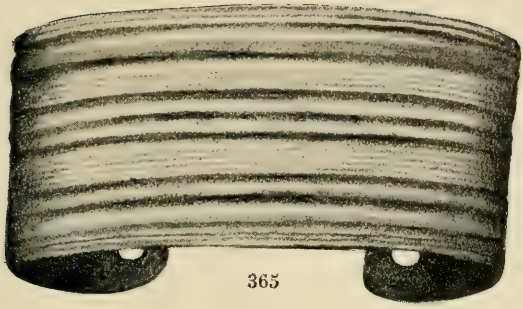

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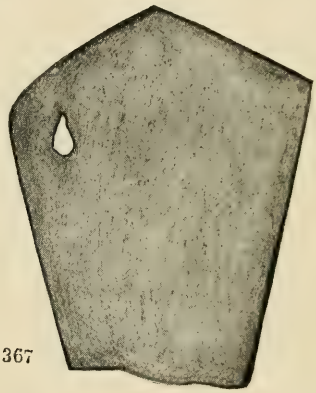

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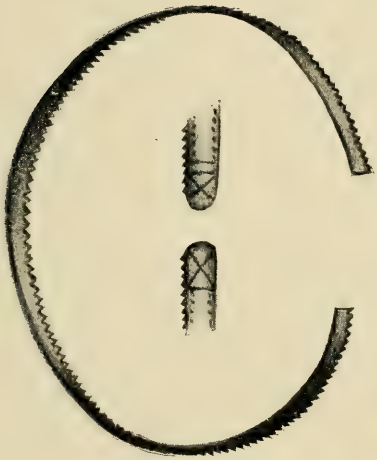

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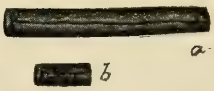

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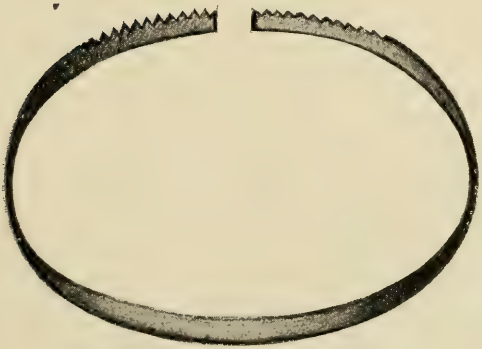

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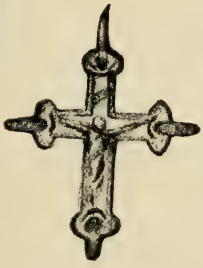

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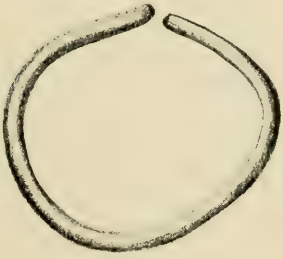

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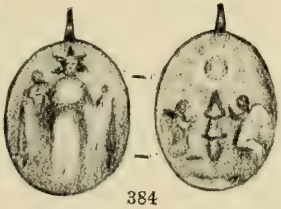

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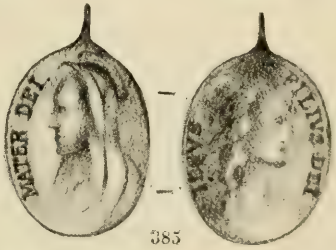

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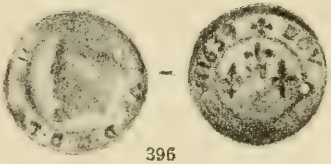

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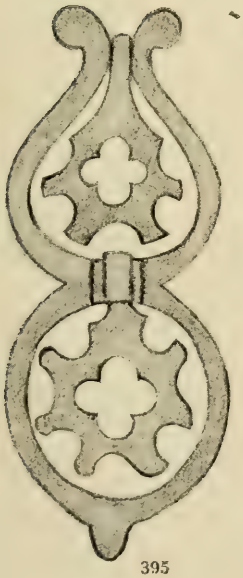

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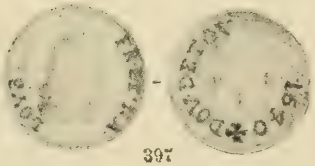

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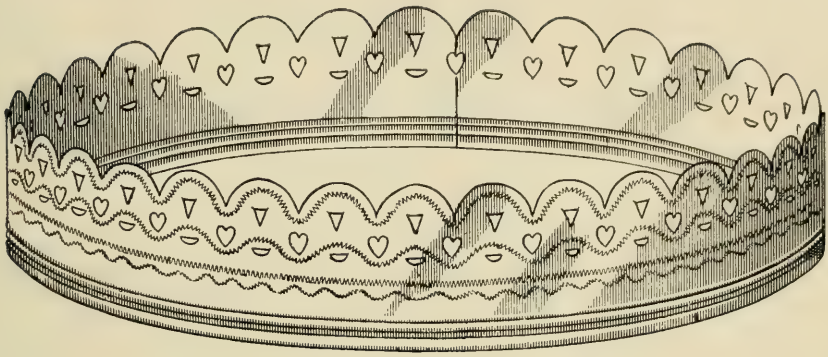

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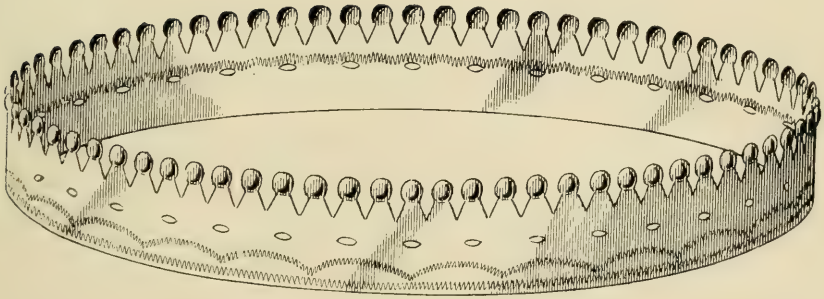

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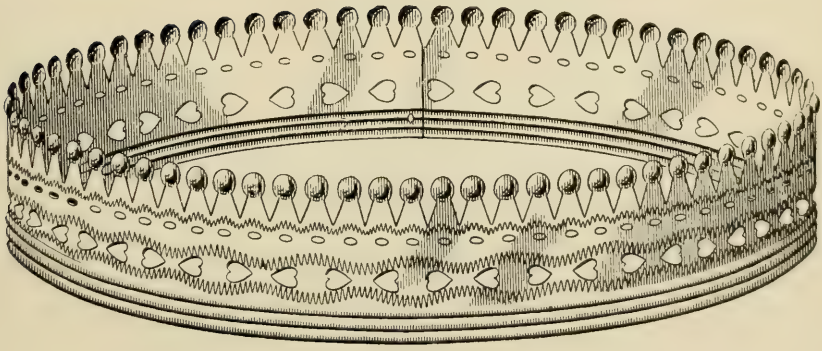

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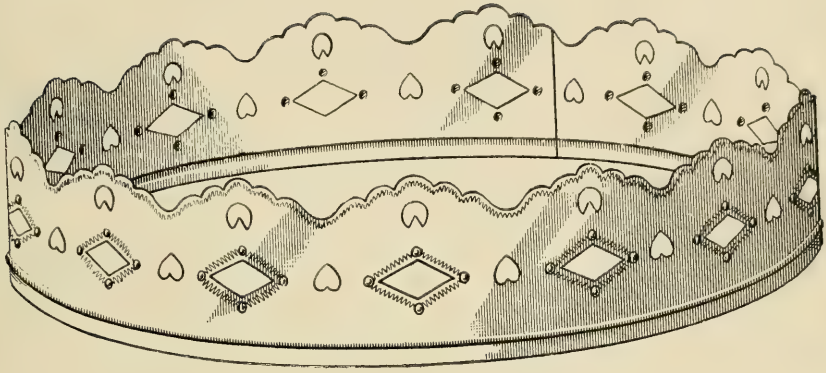

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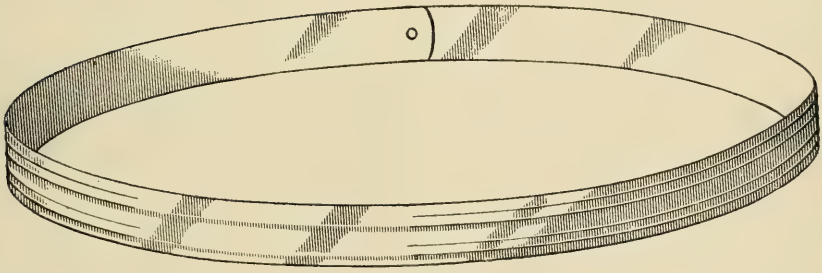

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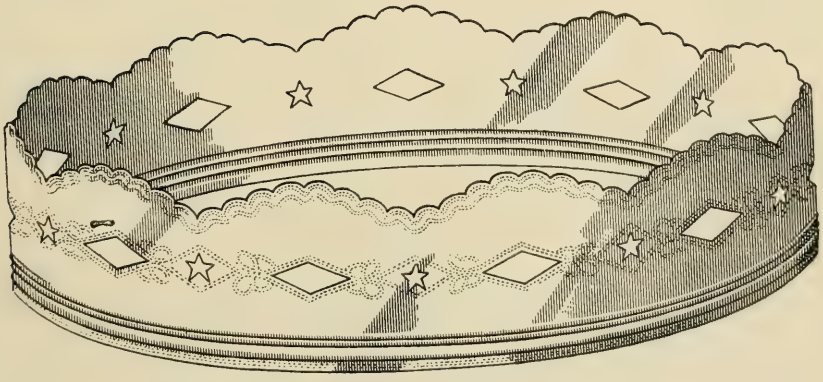

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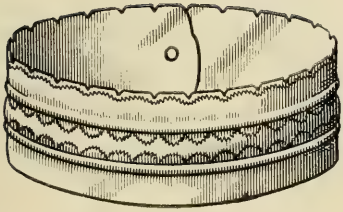

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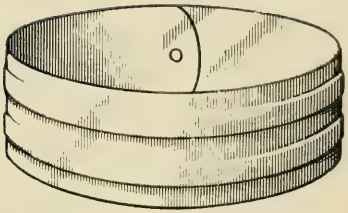

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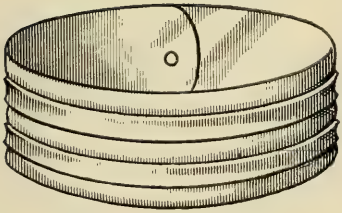

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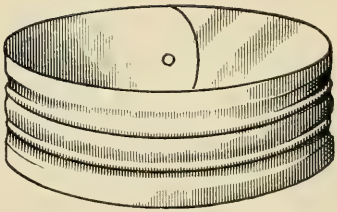

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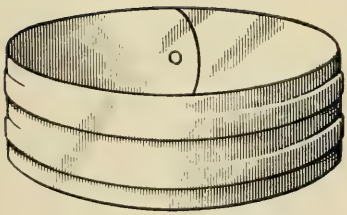

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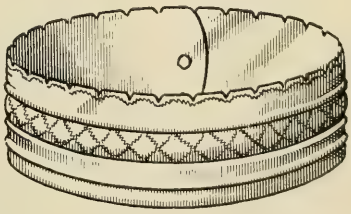

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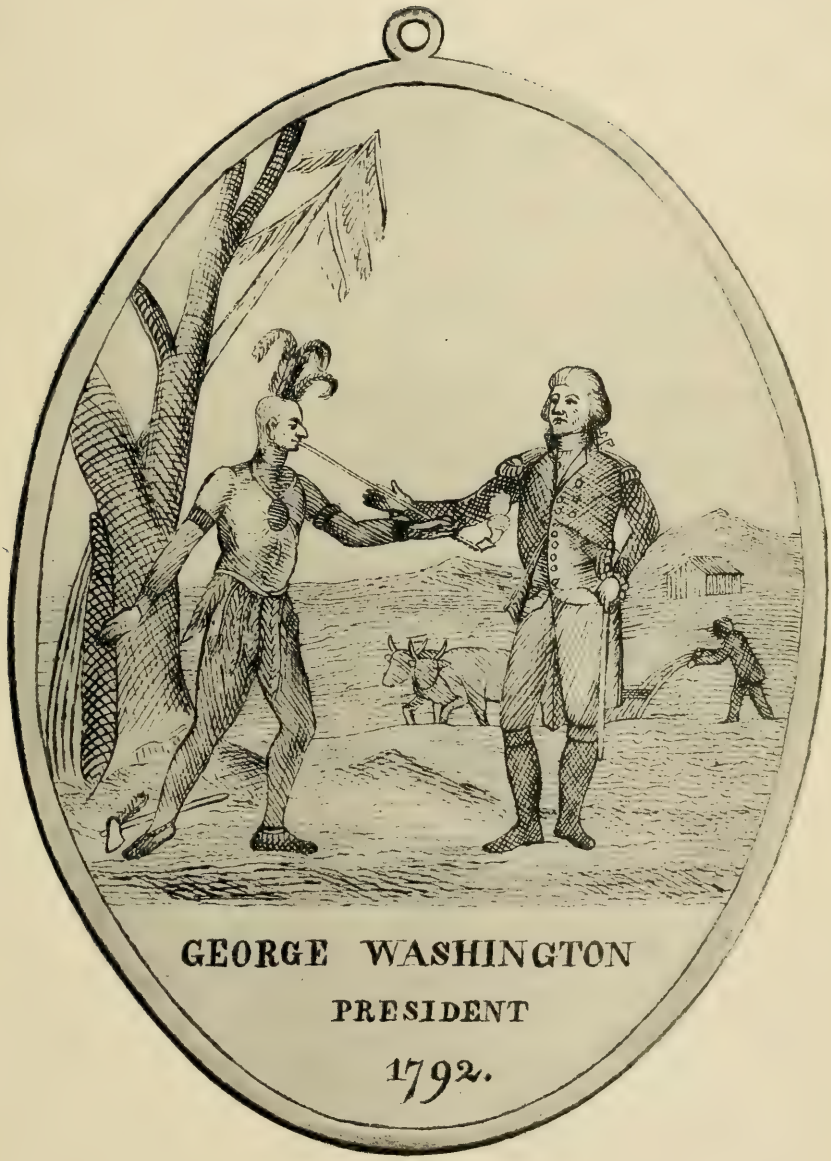
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PRESIDENT
1792.

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Separate reports 25-28, 30, 42-50 and 52 (Botany bulletin 3), are out of print. Report 51 may be had for 40c; 53 for 20c; 54 for 50c; 55 (Botany bulletin 5) for 40c; 56 (Botany bulletin 6) for 50c. Since 1901 these reports have been issued as bulletins.

Descriptions and illustrations of edible, poisonous and unwholesome fungi of New York have been published in volumes 1 and 3 of the 48th museum report and in volume 1 of the 49th, 51st, 52d, 54th and 55th reports. The descriptions and illustrations of edible and unwholesome species contained in the 49th, 51st and 52d reports have been revised and rearranged, and, combined with others more recently prepared, constitute Museum memoir 4.

Museum bulletins 1887-date. O. *To advance subscribers, $2 a year or 50c a year for those of any one division:* (1) *geology, economic geology, mineralogy, general zoology, archeology and miscellaneous,* (2) *paleontology,* (3) *botany,* (4) *entomology.*

Bulletins are also found with the annual reports of the museum as follows:

Bulletin	*Report*	*Bulletin*	*Report*	*Bulletin*	*Report*
12–15	48, v. 1	20–25	52, v. 1	35–36	54, v. 2
16–17	50 "	26–31	53 "	37–44	" v. 3
18–19	51 "	32–34	54 "	45–48	" v. 4
				49–54	55, v. 1

The figures in parenthesis indicate the bulletin's number as a New York State Museum bulletin.

Geology. G1 (14) Kemp, J. F. Geology of Moriah and Westport Townships, Essex Co. N. Y., with notes on the iron mines. 38p. 7pl. 2 maps. Sep. 1895. *10c.*

G2 (19) Merrill, F: J. H. Guide to the Study of the Geological Collections of the New York State Museum. 162p. 119pl. map. Nov. 1898. [*50c*] *New edition in preparation.*

G3 (21) Kemp, J. F. Geology of the Lake Placid Region. 24p. 1pl. map. Sep. 1898. *5c.*

G4 (48) Woodworth, J. B. Pleistocene Geology of Nassau County and Borough of Queens. 58p. il. 9pl. map. Dec. 1901. *25c.*

G5 (56) Merrill, F: J. H. Description of the State Geologic Map of 1901. 42p. 2 maps, tab. Oct. 1902. *10c.*

G6 Cushing, H. P. Geology of the Vicinity of Little Falls, Herkimer Co. *In preparation.*

——— Crystalline Rocks of the Northeastern Adirondacks. *In preparation.*

Kemp, J. F. Crystalline Rocks of Warren and Washington Counties. *In preparation.*

Woodworth, J. B. Glacial Geology of New York. *In preparation.*

Economic geology. Eg1 (3) Smock, J: C. Building Stone in the State of New York. 152p. Mar. 1888. *Out of print.*

Eg2 (7) —— First Report on the Iron Mines and Iron Ore Districts in New York. 6+70p. map. June 1889. *Out of print.*

Eg3 (10) —— Building Stone in New York. 210p. map, tab. Sep. 1890. *40c.*

Eg4 (11) Merrill, F: J. H. Salt and Gypsum Industries in New York. 92p. 12pl. 2 maps, 11 tab. Ap. 1893. *40c.*

Eg5 (12) Ries, Heinrich. Clay Industries of New York. 174p. 2pl. map. Mar. 1895. *30c.*

Eg6 (15) Merrill, F: J. H. Mineral Resources of New York. 224p. 2 maps. Sep. 1895. *50c.*

Eg7 (17) —— Road Materials and Road Building in New York. 52p. 14pl. 2 maps 34x45, 68x92 cm. Oct. 1897. *15c.*
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Eg9 (35) Ries, Heinrich. Clays of New York; their Properties and Uses. 456p. 140pl. map. June 1900. *$1, cloth.*

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M2 (58) Whitlock, H. P. Guide to the Mineralogic Collections of the New York State Museum. 150p. il. 39pl. 11 models. Sep. 1902. *40c.*

M3 (70) —— New York Mineral Localities. 110p. Sep. 1903. *20c.*

Paleontology. Pa1 (34) Cumings, E. R. Lower Silurian System of Eastern Montgomery County; Prosser, C: S. Notes on the Stratigraphy of Mohawk Valley and Saratoga County, N. Y. 74p. 10pl. map. May 1900. *15c.*

Pa2 (39) Clarke, J: M.; Simpson, G: B. & Loomis, F: B. Paleontologic Papers 1. 72p. il. 16pl. Oct. 1900. *15c.*

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Clarke, J: M. New Agelacrinites.
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